

Established 2000

Midlands State University



MIDLANDS CHRISTIAN COLLEGE

STUDENTS DISCIPLINARY SYSTEM



WEDDINGTON NGULUBE

(R145210R)

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This initial phase of the project development first highlights the background of Midlands Christian College (MCC). The scope of the problem (**Problem Definition**) is then outlined, which clearly outlines that the project was being initiated because there was a problem. Objectives are then formulated suggesting how the proposed system will resolve these perceived problems. A hypothesis on development methodology, tools, development costs and estimated duration for the project is made. A justification to the consideration is done to make sure that the system can be viable.

1.2 BACKGROUND

This project compiles students' misbehaviors and sanctions details, clearly stating what each of the steps in the program are and what happens if the sanctions are not met. The system will enable Midlands Christian College to conduct a students-disciplinary system that enables electronic checking of what misdemeanors and sanctions each student has been involved in and what disciplinary actions were taken to address student misconduct.

1.2.1 Background of Organization

Midlands Christian College (MCC) is a co-educational high school of about 450 pupils ranging from form 1 to form 6, located in the city of Gweru, Zimbabwe. The college has boarding facilities as well as providing for day-scholars. Its name refers to its location in the Midlands Province in central Zimbabwe. MCC is an evangelical Christian school which teaches Creationism and actively encourages conversion to Christianity on the part of its pupils. MCC's campus provides both primary school education and secondary school education.

MCC is managed by a Board of Trustees which operates through the Principal. The Board represents a cross section of evangelical Christian denominations and has a diversity of skills and also good pastoral representation to provide balanced and competent governance. The

board serves the school on a voluntary basis, meeting all their travel costs to and from Board meetings, not receiving salaries or any kind of retainer from the college for their services. Whilst some of them are shareholders in the company which developed the school and college, they do not attract dividend payments of any kind as the school and college are non profit making. Parental involvement and assistance in fund-raising and various functions is sought and encouraged, and is co-ordinated by the Parents Assembly.

1.2.2 Organizational Structure

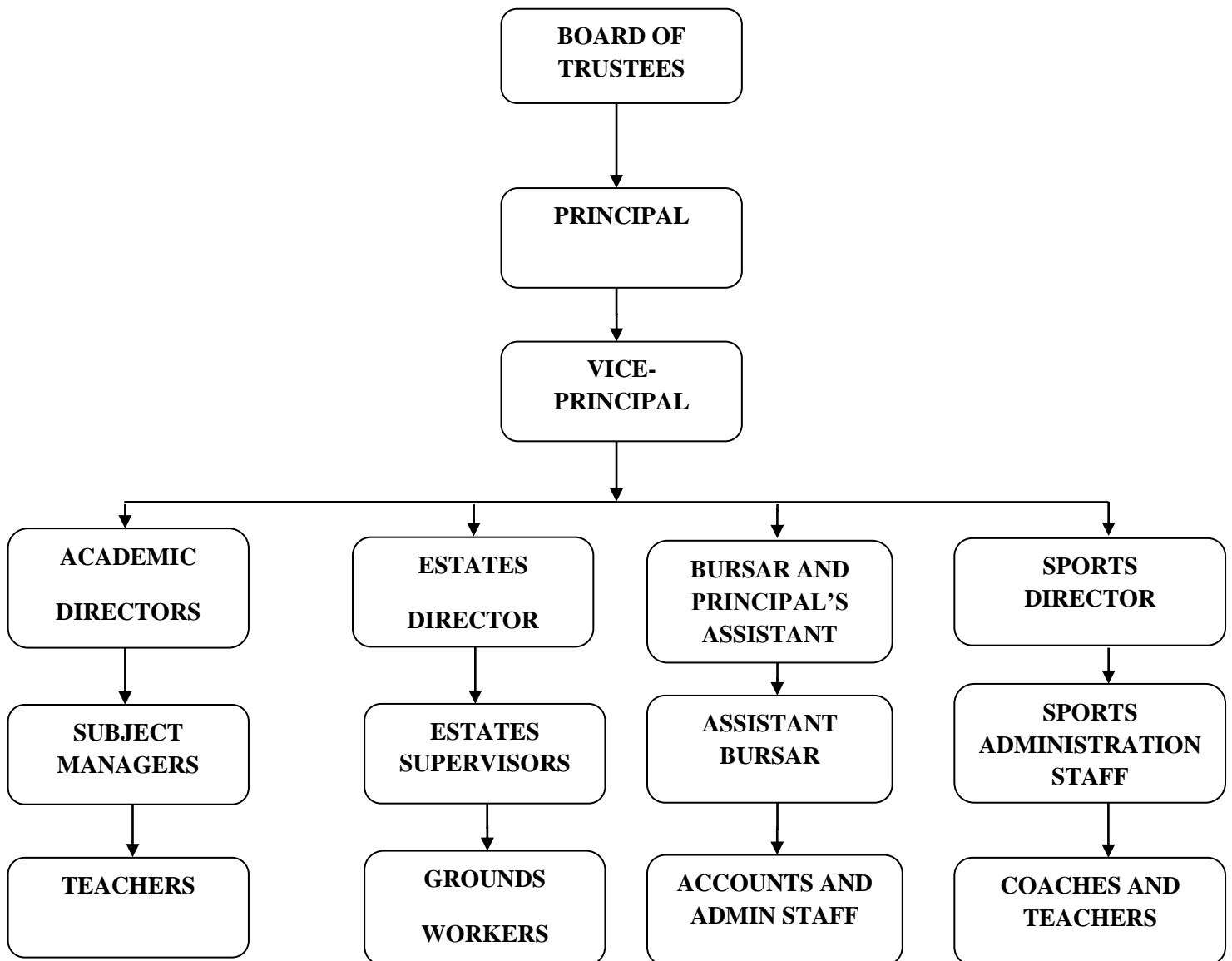


Figure1.1 MCC Organogram

1.2.3 Vision

- To educate pupils from a Christian perspective in a Christian environment for responsible adulthood (Proverbs 22:6).
- To equip pupils with life skills for further education, work and service, through sound teaching and learning techniques, aimed at achieving effectiveness and excellence (Ephesians 4:11 - 15).
- To impact pupils and the community with Christian values, through motivated, committed highly qualified teachers, and a Bible-based curriculum (Isaiah 55:4 - 6).

1.2.4 Mission Statement

- To teach the Lord's way.
- Our student's our reason.
- To do the best we can with what God has given us.

1.3 PROBLEM DEFINITION

Presently Midlands Christian College conducts a manual Students Disciplinary System. This manual system is very inconvenient and erroneous. Some pupils are erroneously omitted from punishments. There is double booking of punishments for various offences committed by students at College. Various misdemeanors committed do not get equal or fair sanctions imposed on students. Disciplinary action imposed on some pupils can be biased. Some influential parents get to manipulate the system by ensuring that their children get away with serious student misbehavior at College. Over the past years, hundreds of MCC students have been negatively impacted by school discipline policies that emphasize the use of suspensions, alternative placements, and expulsions. This has resulted in ineffective, punitive practices and criminal responses to relatively minor student misbehavior.

1.4 AIM

To electronically record misdemeanors and sanctions for pupils in a structured manner and come up with an electronic students-disciplinary expert system.

1.5 OBJECTIVES

- To develop a system that **electronically allocates sanctions to students** for various misdemeanors committed.
- The system should **ensure that no pupils erroneously escape punishments** by keeping track of status of the sanctions imposed on students (that is Pending, Incomplete or Complete).
- System will **ensure no double booking of punishments for students** for the various offences committed by using highly normalized (BCNF) database tables.
- Ensure **system gives unbiased sanctions and awards to students** for various offences committed by disabling manipulation of system decisions by Users.
- The Expert System should help College Administrators **effectively manage and control student behavior** by displaying (on the system dash-board) summary charts and graphs of misdemeanor trends at College and give recommendations on possible solutions.

1.6 HYPOTHESIS

In order to try and eradicate the problems that MCC is facing there is greater need for computerization. The computerized system might achieve the ability to collect, sort and or summarize data faster. To implement this proposal clearly and comprehensively, the designer chose a range of Microsoft based software tools, which include:

- **Dreamweaver CS6:** This is flexible and simple RAD tool which enable designing graphical web based user interface. (Wiley and Sons: 2014)
- **PHP:** This is a server side scripting language flexible enough to cater for my web needs.

- **Microsoft Windows OS** -a flexible operating system that result in a highly compatible system platform.
- **MySQL Server:** dynamic database programming software that allows the user to manipulate user friendly commands when building databases and support other platforms such as **PHP and Html.** (Wiley and Sons: 2014)

1.7 JUSTIFICATION

Information Systems is a backbone to any business operation since it is a tool that supports business integration. Information system is now a key area in an organization; it's no longer a department for cutting costs. The system will not only reduce overload to Student Affairs Department and College Administrators, but also improve performance in managing students' disciplinary procedures. The purpose of an electronic students-disciplinary system is to deal with student affairs administration issues in an efficient manner and ensure a transparent system. The main objective is to efficiently evaluate pupils' behaviors thoroughly, through an electronic system that not only saves lots of time but also gives unbiased sanctions and awards.

1.8 CONCLUSION

In this phase the system developer has highlighted the problems of the current system and opportunities that can be utilized, as well as the business objectives of the proposed system. If the project proposed is approved the next step for the system developer is to come up with a detailed plan for the project.

CHAPTER 2

PLANNING PHASE

2.1 INTRODUCTION

This phase carries out an exploration of the business value of the proposed system, evaluation of alternatives and its functionality. It entails analysis of the feasibility of developing the proposed system. It includes operational, organizational, technical, schedule and economic feasibility of developing the system. It also includes cost-benefit analysis and production of a work plan. It is crucial that the organization appreciates the value to be realized by implementing a new system.

2.2 REASON FOR DEVELOPING NEW SYSTEM

The inefficiency of the current system has triggered the need to come up with a new system. The new system will reduce the hectic job of manually assigning sanctions to pupils and manually coordinating punishment schedules as well. The system provides an easy way to electronically allocate sanctions to students. It will also ensure that there is no double booking of punishments for students for misdemeanors committed. The system gives unbiased sanctions and awards to students for various offences committed. The system provides an easy way to effectively manage and control student behavior by providing an analysis of misdemeanor trends at College and give recommendations on possible solutions from its knowledge base.

2.3 BUSINESS VALUE

This refers to the standard measure of value used in business valuation. Business value definition establishes a standard measure of value used to determine the business worth (Sward, 2006). The focus of this section is to identify the business value of the system to be developed. The development and implementation of the proposed system will work a great deal in improving the effectiveness and efficiency of the MCC's services, hence benefits to the school. The system will be of great value to College Management and the rest for the other stakeholders in the following ways:

- Analysis of misdemeanor trends at College will be simple in proposed system as it is computerised.
- Cost reduction. The amount of paperwork involved is going to be drastically reduced.
- Reduction in manual labour.

2.4 FEASIBILITY STUDY

A feasibility study aims to objectively and rationally uncover the strengths and weaknesses of an existing business or proposed venture, opportunities and threats present in the environment, the resources required to carry through, and ultimately the prospects for success (Georgakellos and Marcis, 2009). A feasibility study evaluates the project's potential for success; therefore, perceived objectivity is an important factor in the credibility of the study for potential investors and lending institutions. It must therefore be conducted with an objective, unbiased approach to provide information upon which decisions can be based (O'Brien and Marakas, 2011). This study will determine the measure of how valuable the advancement of the proposed online students' disciplinary system will be to the school. This involves ascertaining whether the organization has the capacity to support the project with respect to economic, technical and operational support within the School's resource constraints. It therefore justifies the development of the new system or highlights why the project should not continue. The essential concern is to establish if the business environment is conducive enough to bolster the project, else it will be infeasible (Royce, 2010).

2.4.1 Technical Feasibility

This assessment is based on an outline design of system requirements, to determine whether the company has the technical expertise to handle completion of the project. The technical feasibility assessment is focused on gaining an understanding of the present technical resources of the organisation and their applicability to the expected needs of the proposed system. It is an evaluation of the hardware and software and how it meets the need of the proposed system (Benjamin and Wolt, 2010). Technical feasibility centers on the existing manual system of the students disciplinary process and to what extent it can support the system. According to feasibility analysis procedure, the technical feasibility of the system is analyzed and the technical requirements such as software facilities, procedure and inputs are identified. It is also one of the important phases of the system development activities. The system offers greater levels of user friendliness combined with greater processing speed. Therefore, the cost of maintenance can be reduced. Since processing speed is very high and the work is reduced, in the maintenance point of view, management was convinced that the project is operationally feasible. An analysis into

the current structure and infrastructure at Midlands Christian College is sufficient for the system to be technically feasible to develop and implement.

2.4.1 (a) Technical Expertise

This is established if there are individuals best suited for the development of the system before a project commences. The organization has three options to choose from:

- Consulting other software developing companies,
- Training one of its employees,
- Employing new IT personnel well versed with system development.

2.4.1 (b) Hardware and Software requirements

Midlands Christian College has up-to-date computers and servers capable of achieving the anticipated system efficiency. The hardware to be used include the following;

Table2.1 Hardware and Software requirements

Item Required	Recommended Specification	Quantity	Available
Desktop Machines	4Gig RAM, 2.5Gz, 500GB HDD SATA-RAID, DVD/RW and USB 3.0 ports	X 10	YES
10/100/1000 Base T CAT6 Ethernet	100 meter Reel	X 2	YES
Application Server	16Gig RAM, 1-TB HDD SATA-RAID 3GHz+ Quad Core Processor	X 1	YES
Database Server	16Gig RAM, 1-TB HDD SATA-RAID 3GHz+ Quad Core Processor	X 1	YES
Backup Server	16Gig RAM, 1-TB HDD SATA-RAID 3GHz+ Quad Core Processor	X 1	NO
User Software	MS Windows-7 and above ,Office 2010 and above, MySql ,PHP	X 1	YES
Broadband Internet	Fibre optic cables	X 3KM	YES
Network Switch	50-port CISCO or HP Switch	X 2	NO

2.4.2 Economic Feasibility

Economic analysis is most frequently used for evaluation of the effectiveness of the system, more commonly known as a cost/benefit analysis (Balzer et al, 2013). The procedure is to determine the benefits and savings that are expected from a system and compare them with costs. A decision is made to design and implement the system. This part of feasibility study gives the top management the economic justification for the new system. This is an important input to management because very often the top management does not like to get confounded by the various technicalities that are bound to be associated with a project of this kind. A simple economic analysis that gives the actual comparison of costs and benefits is much more meaningful in such cases. If the school implements this system, it need not require any additional hardware resources. College will be saving lots of time as well. A systems request is economically feasible if the projected benefits of the proposed system outweigh the estimated costs involved in developing (or purchasing), installing and operating it (Boehm, 2011).

2.4.2 (a) Development costs

Development costs are the costs a business incurs from researching, growing and introducing a new product, system or service. Development costs are commonly referred to as research and development costs (Sward, 2006). The School is going to incur some development, as well as maintenance costs in the systems' life cycle. Development costs are meant to cover the costs incurred during the development of the system and these can include:

- Networking costs,
- Hardware costs,
- Software license,

Table 2.2 Development costs

Development Costs in USD		
Description	Quantity	Price \$
Intel Server	1	3, 500
HP Network Switches	2	3, 000
HP Laser-jet M604 Printer	1	1, 500
5-KVa SU-KAM Inverter	1	2, 000
Full set PHP Software License	3	1, 300
Total		11, 300

2.4.2 (b) Operational costs

Operational costs are about taking care of what has been implemented. Operational costs are ongoing costs that will be incurred as a result of the project being implemented (Bentley, & Whitten, 2007). These costs will include the following:

- Salaries,
- Maintenance costs,
- Stationery costs.
- User training,
- Other expenses.

Table 2.3 Operational costs

Operational Costs in USD				
Description	Year1 \$	Year2 \$	Year3 \$	Total \$
Maintenance costs	400	500	700	1, 600
Salaries	800	600	500	1, 900
Stationery	600	400	300	1, 300
User Training	500	300	100	900
Other expenses	250	150	100	500
Total	2, 550	1, 950	1, 700	6, 200

2.4.2 (c) System benefits

The following benefits are expected to be derived from the system:

Tangible benefits;

Businesses consist of tangibles like land, buildings, machinery and staff that have a physical presence. Tangible benefits are those measured in monetary terms and intangible benefits cannot be measured in monetary terms but they do have a very significant business impact (Boehm, 2010).

- Reduction in labour costs,
- Reduction of stationary,
- Increased business productivity.

Intangible benefits;

Intangible benefits consist of subjective attitudes and perceptions about a company that cannot be expressed in dollar terms on a balance sheet even though they may increase the company's value as a business (Sword, 2012). For instance, a new computer information system may produce an intangible benefit of better employee morale that contributes to retention of talent, more innovation, and improved customer satisfaction. But there's no way to directly translate improved employee morale into revenue even though employee morale will have an effect on revenue.

- Improved quality of data,
- System will improve goodwill,
- Improved efficiency as worker morale is increased,
- Improved efficiency as far as dissemination of information is concerned,
- Increased client satisfaction,

Table 2.4 System benefits

System benefits in USD				
Description	Year1	Year2	Year3	Total
	\$	\$	\$	\$
Reduced-labour-costs	5, 000	3, 000	2, 000	10, 000
Reduced stationary	2, 500	1, 500	1, 500	5, 500
Improved production	4, 000	3, 000	2, 000	9, 000
Total Benefits	11, 500	7, 500	5, 500	24, 500

2.4.2 (d) Cost-benefit analysis

This aids to compare the expected cost of development and operation of the system with the benefits of having it in place. Any project requiring an investment, must, as a minimum, provide greater benefit than putting the investment angular (Boehm, 2011).

Table 2.5 Cost/Benefit Analysis

Description	Year1	Year2	Year3	Total
	\$	\$	\$	\$
Total benefits	11, 500	7, 500	5, 500	24, 500
Less: Development costs	(6, 350)	(7, 525)	(3, 625)	(17, 500)
Net benefits	5, 150	(25)	1, 875	7, 000

2.4.2 (e) Comments to the Cost–Benefit Analysis results

From the Cost-Benefit Analysis results obtained, it can be noted that benefits outweigh the costs hence we can consider proceeding with this project. In order to choose between projects we need to take timing of the costs and benefits into account as well as the benefits relative to the

size of the investment. According to Royce (2010), one common method for comparing projects on the basis of their cash flow forecasts is Return of Investment (ROI).

2.4.2 (f) Return on Investment

Return on investment (ROI) measures the gain or loss generated on an investment relative to the amount of money invested. ROI is usually expressed as a percentage and is typically used for personal financial decisions, to compare a company's profitability or to compare the efficiency of different investments (Sward, 2006).

$$\text{ROI} = (\text{Net Benefits} / \text{Development costs}) \times 100$$

Net benefits: \$7 000

Development costs: \$17 500

Therefore: $\text{ROI} = (7\,000 / 17\,500) \times 100$

=40%

The return on investment provides a simple, easy to calculate measure on return capital. In this case a percentage of 40% is a moderate figure, although it takes no account of the timing of cash flows. Hence the project can be carried on as the ROI figure is very high.

2.4.2 (g) Payback Period

According to Williams et al, (2012), **Payback period** in capital budgeting refers to the period of time required to recoup the funds expended in an investment, or to reach the break-even point. The time value of money is not taken into account. Payback period intuitively measures how long a project takes to "pay for itself." All things being equal, shorter payback periods are preferable to longer payback periods. Payback period is popular due to its ease of use despite the recognized limitations. The payback period is considered a method of analysis with serious limitations and qualifications for its use, because it does not account for the time value of money, risk, financing, or other important considerations, such as the opportunity cost.

Table 2.6 Payback Period

Year	Cash-flow / (Cash-outflow) \$	Cumulative Cash-flow \$
0	(6, 200)	(6, 200)
1	5, 150	(1, 050)
2	(25)	(1, 075)
3	1, 875	

Therefore: $(1\ 075 / 1\ 875) \times 12$ (months)
= 6.9 months

Payback period for this project will therefore be **2-years, 7-months**.

2.4.2 (h) Net Present Value

The Net Present Value analysis determines the profitability of the new project taking into account the time value for money (Balzer et al, 2013). It adjusts future costs and expresses them in terms of the current value of money. Having projected the company's free cash flow for the next three years, we want to figure out what these cash flows are worth today. That means coming up with an appropriate discount rate which we can use to calculate the net present value (NPV) of the cash flows. A discount rate of 15% was chosen. This option was adopted in light of fairly low inflation rates prevailing in the country.

Discount Factor = $1 / (1 + r)^i$; where r = capital discount percentage rate and i = time (i.e. number of years)

Present Value = Value in Year * Discount Factor

Net Present Value = Sum of Present Values

Table 2.7 Net Present Value (all amounts in US\$)

Year	Amount	15% Discount Factor (DCF)	Present Value (PV)
0	(17, 500)	1	(17 500)
1	11, 500	0.86957	10, 000
2	7, 500	0.75614	5, 671
3	5, 500	0.65751	3, 616
			NPV = 1, 787

The NPV shows that the project is viable. The NPV value is positive and considers the system's benefits during its whole life.

2.4.3 Social feasibility

This a detailed study on how one interacts with others within a system (O'Brien and Marakas, 2011). The proposed system is going to affect various stakeholders in the school in various ways; socially the proposed system has been accepted with a great response as it is designed to make students and teachers' life easier. Social feasibility seeks to assess the impact to the MCC's society and find out whether it is possible to impact the society positively through the new system. The system will have the impact on the society like:

- Encourage family time for employees. As employee work loads are removed, they will be able to enhance their social lives and increase interaction with others (family included).
- Through the creation of a paperless environment, this will save on natural resources.

2.4.4 Operational feasibility

According to Bentley and Whitten (2007), operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development. The operational feasibility assessment focuses on the degree to which the proposed development projects fits in with the existing business environment and objectives with regard to development schedule, delivery date, corporate culture and existing business processes. The essential questions that help in testing the operational feasibility of a system are the following;

- Does management support the project?
- Are the users not happy with current business practices?
- Will it reduce the time (operation) considerably? If yes, then they will welcome the change and the new system.
- Have the users been involved in the planning and development of the project? Early involvement reduces the probability of resistance towards the new system.
- Will the proposed system really benefit the school? Does the overall response increase? Will accessibility of information be lost? Will the system affect the potential students in any considerable way?

With the school’s much placed emphasis on quality service provision to its students, this system goes a long way in ensuring that this attribute is met. In order to achieve this, consultations with several members of staff were made and through these, problems within the current system were identified.

2.4.5 Project Risk Analysis

Project Risk Analysis and Management is a process designed to remove or reduce the risks which threaten the achievement of project objectives (Boehm, 2011).

Table 2.8 Software Risk Analysis

Risk Item	Risk Management Technique
Personnel shortfall.	Team building and cross training.
Unrealistic schedules and budgets.	Detailed milestone cost and schedule estimation.
Developing the wrong functions and properties.	Organizational analysis, operations-concept formulation, user surveys and user participation.
Developing the wrong user interface.	Prototyping, scenarios, task analysis and user participation.
Implementing “neat features” that are not required.	Requirements scrubbing, prototyping and cost-benefit analysis.
Real-time performance shortfalls.	Simulation, benchmarking, and prototyping.
Straining computer science capabilities.	Technical analysis, cost-benefit analysis, prototyping and reference checking.
Requirements changes.	Active user participation and prototyping.
Late delivery of the project.	Strict adherence to project schedules and deadlines.
Financial constraints.	Source funds from alternative project sponsors.

2.5 DEVELOP WORK PLAN

This is a work plan that records and keeps track of all tasks that need to be accomplished over the life of the project. It identifies the tasks and their expected durations (Boehm, 2011). The System Development Life Cycle will be used to model the activities that are going to be

followed in the development of the project. The project time allocation for each phase is shown below with their respective dates in the Gantt chart that follows:


Table 2.9 Project schedule

Phase	Start	End	Duration(months)
Proposal	12/08/2016	11/09/2016	1
Planning	12/09/2016	11/10/2016	1
Analysis	12/10/2016	11/12/2016	2
Design	12/12/2016	11/02/2017	2
Implementation	12/02/2017	11/04/2017	2
Maintenance	12/04/2017	Ongoing	Ongoing

Table 2.10 Gantt chart

ACTIVITY	Month	Month	Month	Month	Month	Month	Month	Month	Month
Project	█								
Planning		█							
Analysis			█	█					
Design					█	█			
Implementation							█	█	
Maintenance									█
Documentation	█	█	█	█	█	█	█	█	█

Key

 = 1 Month

2.6 CONCLUSION

After a well informed and thorough feasibility study, business value analysis and cost-benefit analysis, it was established that the proposed system is viable. The project was granted permission to proceed to the next phase which is analysis of the project.

CHAPTER3

ANALYSIS PHASE

3.1 INTRODUCTION

Royce, (2010) defines analysis as a problem solving technique that decomposes a system into component pieces for the purpose of studying how well those component parts work and interact to accomplish their purpose. This phase takes a closer look at the analysis of the existing system to be developed. It is also one of the most important phases in the systems developmental cycle. It will also look at the operations within the current system, how are processes linked within the proposed system and how are the activities going to be coordinated. A detailed analysis of the current system being used by Midlands Christian College and that of the proposed system was carried out to enable the developers to:

- Have an understanding of the processes involved in the company's activities,
- Have an insight into the needs of the various users of the system to be developed.

This is the phase that describes the information gathering methodology, process modeling and data modeling (Balzer, et al 2013).

3.2 INFORMATION GATHERING METHODOLOGIES

A range of research methods were implemented during the research process and these ranges from **interviews**, **questionnaires** and **participative observations**. Data was collected from both internal and external sources which in a way improved the reliability and validity of the research findings. The table below shows an outline of the interviewed population from various stakeholders which included the school's clients.

Table 3.1 Tabulation of sample size

Source of data	Number of respondents
Teachers	20
Students	50
Admin Staff	3
Stewards	10

3.2.1 Interviews

According to Polak and Green (2015), an interview is a conversation where questions are asked and answers are given. In common parlance, the word "interview" refers to a one-on-one conversation with one person acting in the role of the interviewer and the other in the role of the interviewee. The interviewer asks questions, the interviewee responds, with participants taking turns talking. Interviews usually involve a transfer of information from interviewee to interviewer, which is usually the primary purpose of the interview, although information transfers can happen in both directions simultaneously. An interview is a flexible tool for the evaluation of the validity of the information that is being gathered (Boehm, 2012). They require experience in arranging the interview, setting the stage, establishing rapport. The questions must be phrased clearly, avoiding misunderstandings and there is need for careful evaluation of responses.

Interview questions were designed carefully to solicit relevant information related to the administration of the students' disciplinary system at MCC. The questions were based on main functionality of the system. Only ten questions were used for interview purposes. This was done to keep interview time short as people would be busy with their daily work schedules. A total of thirteen people were interviewed, that is, three Admin Staff and 10 Stewards. This target group was chosen because they are the ones who are more hands-on with the students' disciplinary processes at College. Details of interview questions used are found under appendix C.

3.2.2 Questionnaires

The questionnaire has high integrity because the researcher cannot influence the subject hence no bias (Royce, 2010). These were sent mostly to the school's Teaching Staff and clients (Pupils), and were meant to get an overview of Midlands Christian College's services from a client's perspective. A total of 150 questionnaires were distributed to various groups, that is, 100 questionnaires for students (that is, form-4 to Upper-6 students) and 50 questionnaires were distributed to Staff. However, only 50-responses were received from students and 20-responses were received from teachers.

Basically more or less the same kind of questions was used on questionnaires. However, the main difference being a target of a wider audience and since anonymity of response is assured, this generally results in honest and non-bias responses given. Also respondents have time to consider their responses before writing them down on the questionnaire. A total of 13 questions were used on the questionnaire. These were divided into two sections, section-A with simple yes or no answers and section-B with open ended questions for clarity purposes. Details of the questionnaire used are found under appendix D.

3.2.3 Observation

Observation is the active acquisition of information from a primary source (Polak, and Green 2015). The system's processes and procedures were noted. This methodology was carried out during viewing the system at work. The process involved an assessment of how the existing system operates. This was done by observing how the Stewards capture data into the database and how the students fill in the manual labour forms. These were performed during working hours and day to day activities were not disturbed in any way. Averages of 6-days were used for observation purposes, one day per week, mainly on Fridays when punishments were conducted at campus. Working in conjunction with Stewards at MCC, observations revealed a perfect picture of how the system works. Observations enabled the researcher to verify and validate information obtained from other sources (that is, interviews and questionnaires). Details of the observation score-sheet used are found under appendix E.

3.3 ANALYSIS OF THE EXISTING SYSTEM

Using the data obtained by the use of the three information gathering methodologies mentioned above the analyst obtained the following processes in the current system. Midlands Christian College conducts a manual-labour disciplinary system using information obtained from Teachers and Stewards. The Teacher or Steward who finds a student(s) doing the wrong thing sends their name(s) and offence to the Stewards Disciplinary Committee Heads.

A log-book is used (by the Prefects/Stewards Disciplinary Committee Members) to manually record details of the offences committed by students. Such details include the following; Date, Student-Name, Offence-Committed, Status (that is, incomplete or complete) and Signature of responsible prefect/steward. The Stewards then issue manual labour slips to be filled in by the offenders.

Details on the manual labour slip include the following; Name-of-Pupil, Name-of-Teacher-Who-Assigned-Punishment, Offence-Committed-by-Pupil, Date-of-Manual-Labour, Duration-of-Labour-Hours, Signature-of-Pupil, Name-of-Parent, Signature-of-Parent, Name-of-Prefect/Steward and Signature-of-Prefect/Steward. There is a footnote on the manual labour slip that reads, “Please have the prefect who supervised your manual labour to sign this form and then you hand it back to the teacher who gave you the punishment. Failure to do this may invite a further imposition on you.” Filled-in/completed Manual-Labour-Slips are kept in a flat file.

Student Affairs Director uses the completed manual labour forms to compile a supervision timetable for manual labour scheduled tasks and gives this to Stewards Disciplinary Committee Heads. The students are required to show-up for their punishments that would have been assigned to them, otherwise failure to do this will invite further imposition on them. When manual-labour tasks are completed, the students then get ticked-off in the log-book to acknowledge completion of allocated punishment.

3.4 PROCESS ANALYSIS

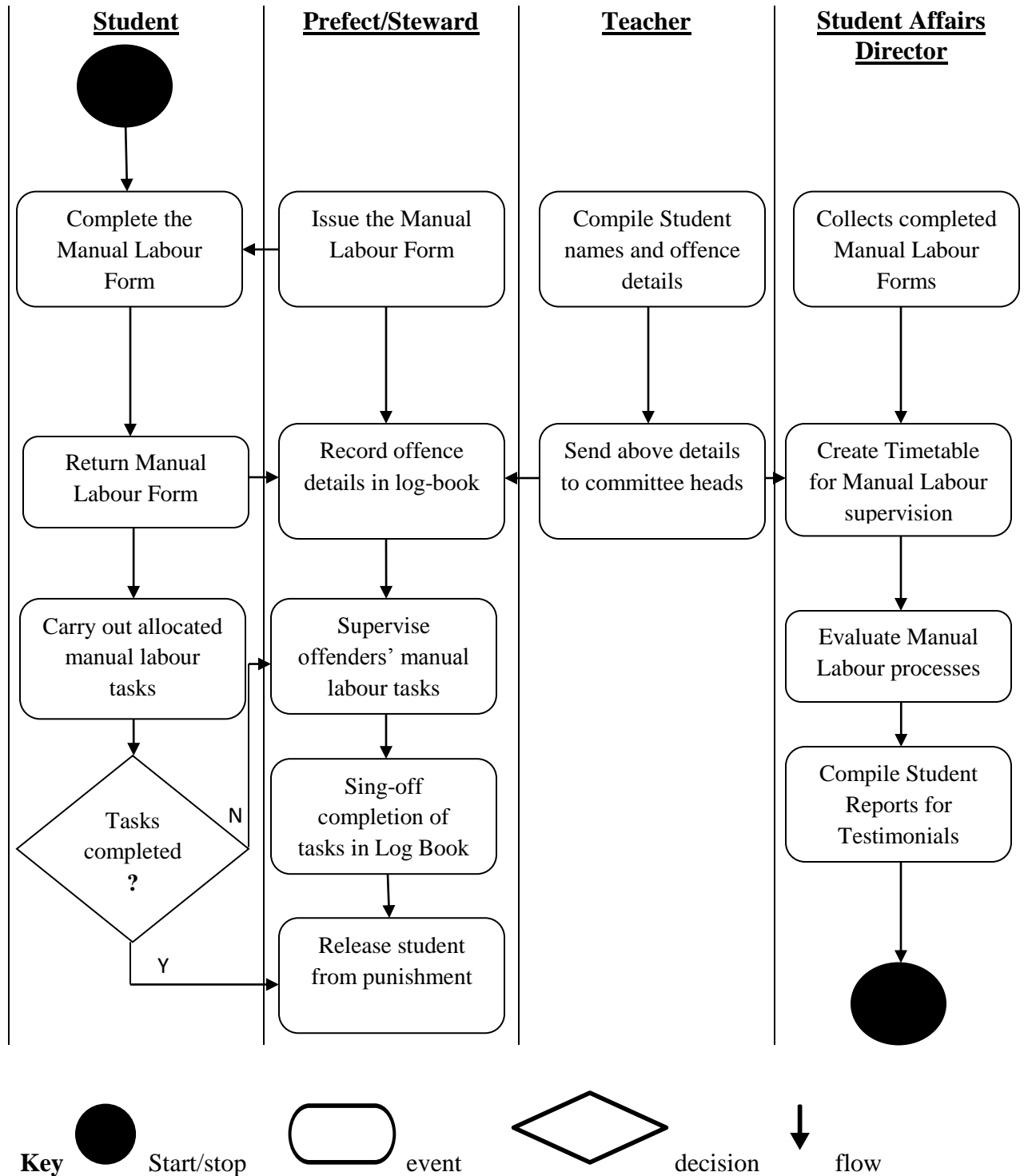


Figure 3.1 Activity Diagram of the Existing System

3.5 DATA ANALYSIS

The aim of this stage is to illustrate the processes and activities that are performed in the current system and also the data flows of the system. It also gives a visual picture of what is really happening at the school. Two diagrams are involved here and these are:

3.5.1 Context Diagram

A System Context Diagram (SCD) in software engineering and systems engineering is a diagram that defines the boundary between the system, or part of a system, and its environment, showing the entities that interact with it (Royce, 2010). This diagram is a high level view of a system.

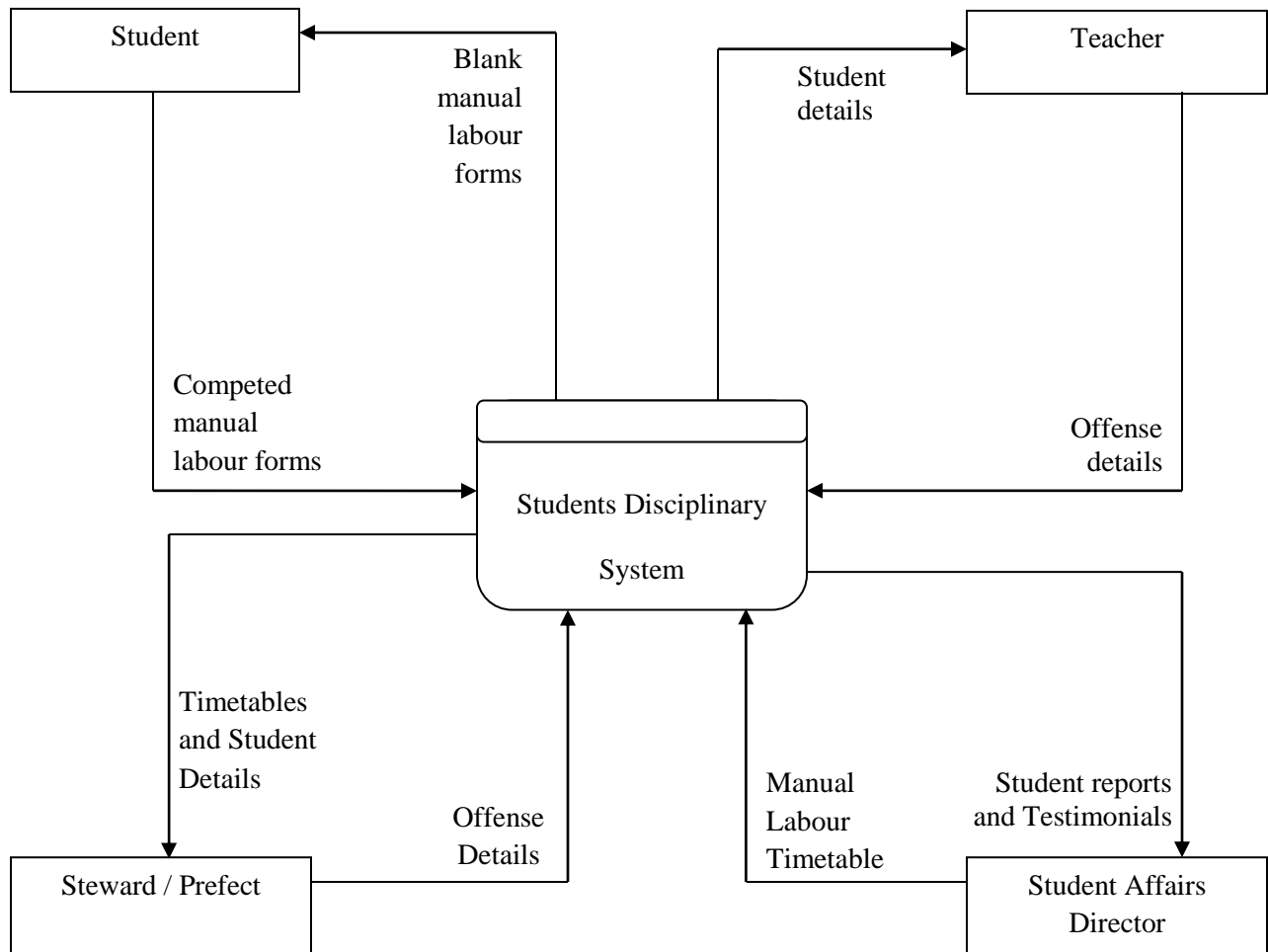


Figure 3.2 Context Diagram of the Existing System

3.5.2 Data Flow Diagram (DFD) of the Existing System

Data flow diagrams are used to provide a clear representation of any business function. The technique starts with an overall picture of the business and continues by analyzing each of the functional areas of interest. This analysis can be carried out to precisely the level of detail required. The technique exploits a method called top-down expansion to conduct the analysis in a targeted way.

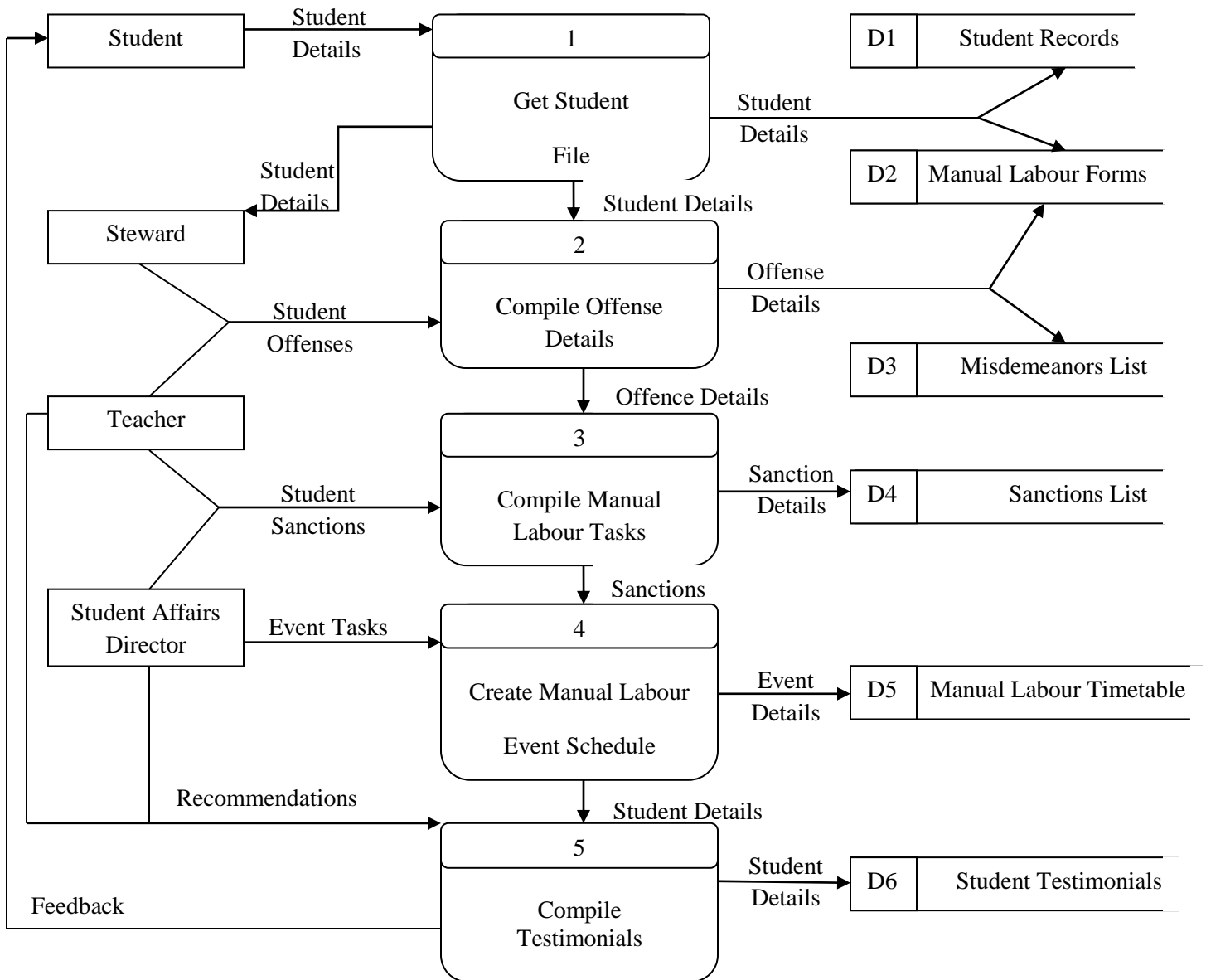
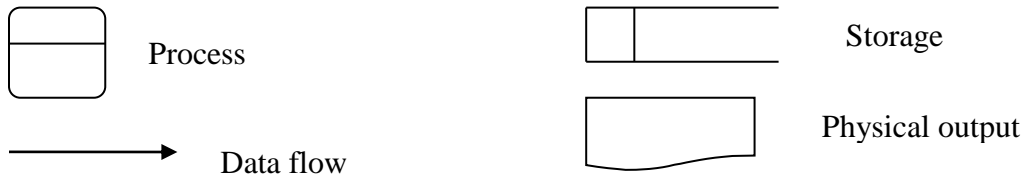


Figure 3.3 DFD for the existing System

Key for the data flow diagram



3.6 WEAKNESSES OF THE CURRENT SYSTEM

The current system has the following weaknesses:

- The current system is exceptionally tedious.
- Because of manual setup, a few students can be erroneously omitted from punishments.
- Double booking of pupils (for punishments) for the various offenses committed can easily happen.
- Allocation of sanctions for certain students can be biased.
- Student Testimonials can also be biased.

3.7 EVALUATION OF ALTERNATIVES

Having produced the user requirements, the analyst noted that there is need for a new system to replace the current one. A decision had to be made as to how the current system will be replaced.

The analyst came up with the following three alternatives for the current system, which are:

- Outsourcing.
- Improvement.
- Development.

3.7.1 Outsourcing

This means hiring of an external system vendor, developer or service provider to create the system (Balzer, et al 2013). A first alternative of resolving a problem is to contract external developers to do the project for the company and it follows the below mentioned constraints:

In spite of benefits aligned with outsourcing the below mentioned grave limitations out ruled it as an option:

- Services are generally expensive if charged on hours as the developers may take their time to develop and gain an edge on the company.
- An understanding of the organization's culture and methods may be lacking to create a system that readily identifies with the users.

3.7.2 Improving the current system

The existing system is prone to mass errors and omission. Excel workbooks are currently used for storing student records. Reasons for not opting for this alternative lie in some limitations below:

- Retrieval of data and information take too much time, the administrator has to go through all the files searching for certain records.
- There is no security. This is because anyone with access to the files can manipulate the information or data in them.

3.7.3 Developing the system in-house (preferred alternative)

It involves the development of a computer system from within the company's IT resource. Building a system in house also builds technical skills and functional knowledge within the organization. The developer works with the users and their understanding of the procedures grows and they become better able to align information systems with strategies and needs.

Advantages of developing the system in-house

- Cheap in the long-run. The cost of maintenance is within reach for the organization since the system will be developed by an internal IT Staff member.
- User satisfaction. Satisfies unique user requirements since the system will be tailor made as per the identified requirements.
- Problem elimination. Developing a new system will meet constraints of the existing system and technology.
- Easy system support. Since documentation is produced at the end of the project, the system can be easily supported and maintained by other personnel rather than those who designed and developed the system.

- Resource development. It allows the development of internal resources and capabilities.

3.8 REQUIREMENTS ANALYSIS

This section looks at what capabilities should the new system provide for its users i.e. functional and non-functional. It also looks at what data must be captured and stored. It also looks at what performance level is expected as well as what are the priorities of different requirements. As a result, the analysis team develops the Requirements Specification Document (RSD). Requirements analysis can be divided into:

- Functional requirements,
- Non-functional requirements.

3.8.1 Functional Requirements (Use Case diagram)

In systems engineering and requirements engineering, a functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors (Boehm, 2012). The students' disciplinary expert system should be able to perform the following functional requirements:

- Allow Stewards to log-in to the system and update the Knowledge Base (KB) with student details, misdemeanors and sanctions.
- Allow the system administrator to log in, add, edit and delete staff and student records.
- Admin should also be able to view ad-hoc queries about student records (misdemeanors and sanctions) and view summary data about general student behavioral problems at College.
- The Expert System (ES) should also provide management with recommendations on solving student behavioral problems for decision support.
- ES should ensure no double booking of students for punishments on various offenses committed.
- The expert system should electronically create event-schedules for punishments from all students entered for that particular week.

- The Administrator and Stewards should be able view tasks which pupils have completed so far in the punishment schedule.
- ES should electronically send email messages to offenders (pupils) informing them of their scheduled punishments for the week.
- The expert system should store usernames, passwords, e-mail addresses and all the necessary users' attributes in a database and enable administrator to create DB backups.
- ES should produce student testimonials for all pupils at College.
- ES should deny access to unapproved Users.

3.8.1(a) Use case diagram

According to Boehm (2012), use-cases are used during the analysis phase of a project to identify and partition system functionality. They separate the system into actors and use cases. Actors represent roles that are played by users of the system. In the project, we have three actors, which are the Student, the Steward/Prefect and the Administrator. Actors however are not just humans. They can be computers, pieces of hardware, or even other software systems. The only criterion is that they must be external to the part of the system being partitioned into use cases. They must supply stimuli to that part of the system, and they must receive outputs from it. On the other hand, use cases describe the behavior of the system when one of these actors sends one particular stimulus. This behavior is described textually.

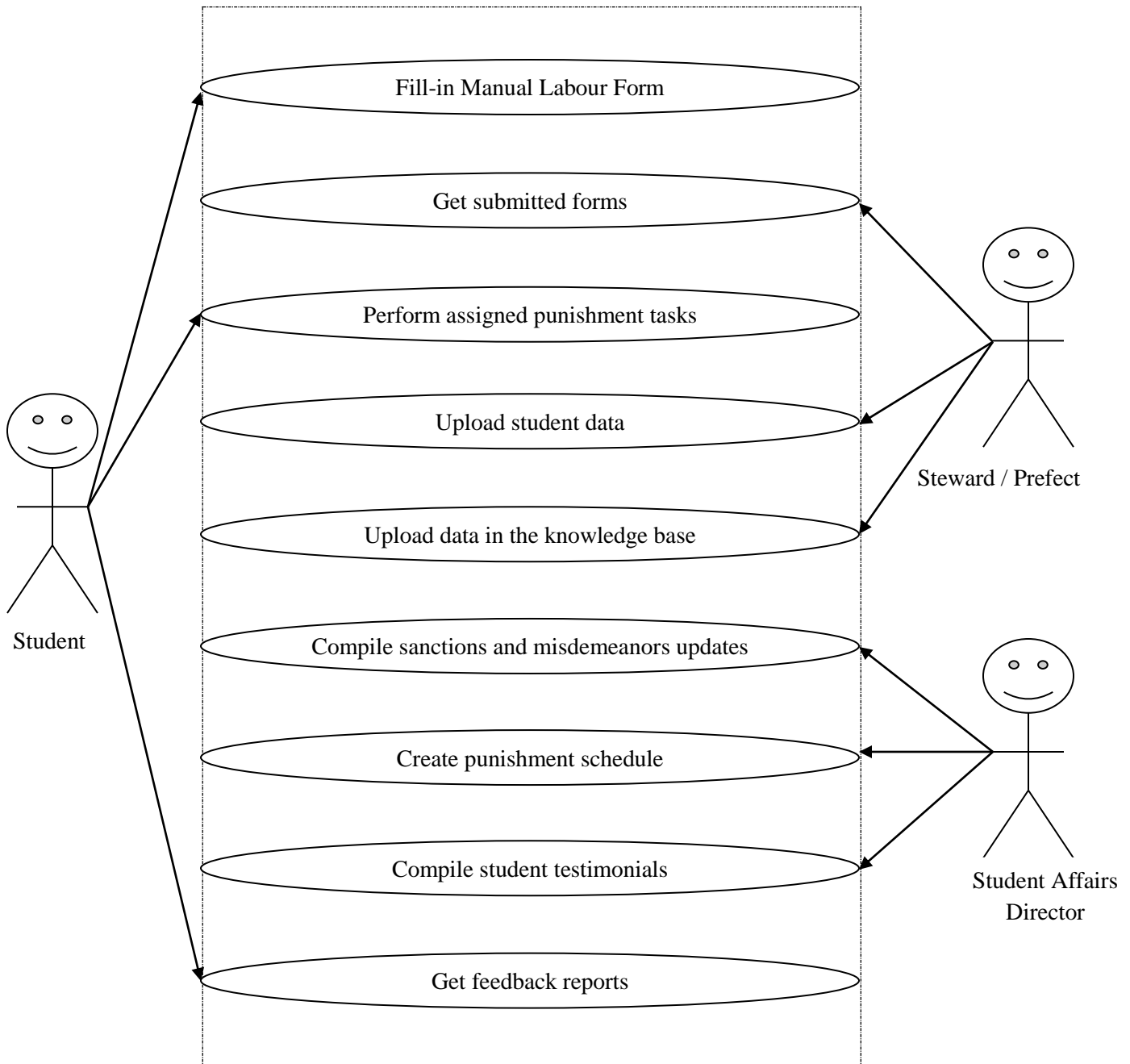



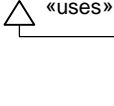
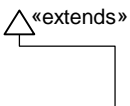


Figure 3.4 Use case diagram of current system

Symbol	Description
	Actor
	Use case
	System boundary
	Uses
	Extends

Key for use case diagram

3.8.2 Non-functional requirements

Non-functional requirements define how a system is supposed to be (Balzer, et al 2013). The online expert system should be able to provide the following non- functional requirements:

- The system will provide an interface that is easy to comprehend and use to all users.
- The system should be reliable and consistent in all its operations. That means the system has minimal down times and information is not lost during both active and passive states.
- The system should be highly portable, easy to install and maintain.
- System should be able to support multi-user scenario.
- System should allow for data recovery in situations of system failure.

3.8.2 (a) System Development Constraints

In the development of the system, the following may be encountered during the different stages of development which are:

- Space utilization: The amount of storage space used by the database files and their access path structures.
- Technical constraints: Not enough man-power to concentrate on different modules of the system.
- Time constraints: More time is needed to complete the project as it encompasses the amalgamation of all modules that will be used within the system.
- Response time: This is the elapsed time between submitting a transaction for execution and receiving a response.
- Transaction throughput: The average numbers of transactions that can be processed per minute which must be measured under peak time.

3.9 CONCLUSION

A fully computerised system would fulfill the user requirements whilst an off the shelf solution would not provide all necessary processes required and would be too general and does not provide all the requirements of the system. From the information gathered, a fully computerised system would be the most appropriate system to develop. Therefore it becomes apparent to now proceed to the design of the system.

CHAPTER 4

DESIGN PHASE

4.1 INTRODUCTION

Software design may refer to either all the activities involved in conceptualizing, framing, implementing, commissioning, and ultimately modifying complex systems or the activity following requirements specification and before programming, as in a stylized software engineering process (Ambler and Lines, 2012). Software design usually involves problem solving and planning a software solution. This includes both a low-level component and algorithm design and a high-level, architecture design (Freeman and David, 2014). The design phase basically looks at the functionality of the proposed system and how it is going to be constructed. In this phase we were able to define the necessary requirements of the system after analyzing the requirements of the logical design. The proposed system is expected to meet the functional requirements of the users in terms of efficiency, effectiveness, reliability and maintainability.

Effectiveness

Effectiveness is the extent to which a system may be expected to achieve its objectives within its specified environment. System effectiveness is a function of system availability, capability, and dependability (Bourgeois, 2014). The system to be constructed should work efficiently with little or no errors and should not affect the working process within Midlands Christian College.

Reliability

This is the ability of a computer program to perform its intended functions and operations in a system's environment, without experiencing failure/system crash (Allen, 2010). The system should be able to deliver timely outputs to facilitate for quicker decision making.

Maintainability

This is the ability of a computer program to be retained in its original form, and to be restored to that form in case of a failure (Benyon, 2007). The system should provide the clients with ease of maintainability. New features must be easily added on to the system and it should be able to adjust to the turbulent changes in the software environment.

Efficiency

This is a comparison of what is actually produced or performed by the system, with what can be achieved with the same consumption of resources (money, time, labour, etc.). It is an important factor in determination of system productivity (Boehm, 2010). The processes taking place within the system should be able to deliver results within the specified time limits. In order to have a better understanding of the proposed system, various processes within the system that are going to work and in some cases how they interact with each other need to be known. The design of the proposed system for Midlands Christian College was categorized into the following design phases:

- Architecture design
- Database design
- Interface design

4.2 DESCRIPTION OF THE PROPOSED SYSTEM

The major aspect for proposed system will be to create an online students-disciplinary expert system, integrated with a web interface which will enable students to get punishment allocation automatically, once the committed offense is specified. The system will automatically send punishment details to students by way of electronic mail messages. Punishment schedules will be automatically done as well. The system will also ensure no double booking of punishments for the various offenses committed. ES should ensure that no pupils erroneously escape punishments by keeping track of status of the sanctions imposed on students (that is Pending, Incomplete or Complete). The expert system will display (on the system dash-board) summary charts and graphs of misdemeanor trends at College and give recommendations on possible solutions. Below is the context diagram and data flow diagram of the proposed system.

4.2.1 System Inputs

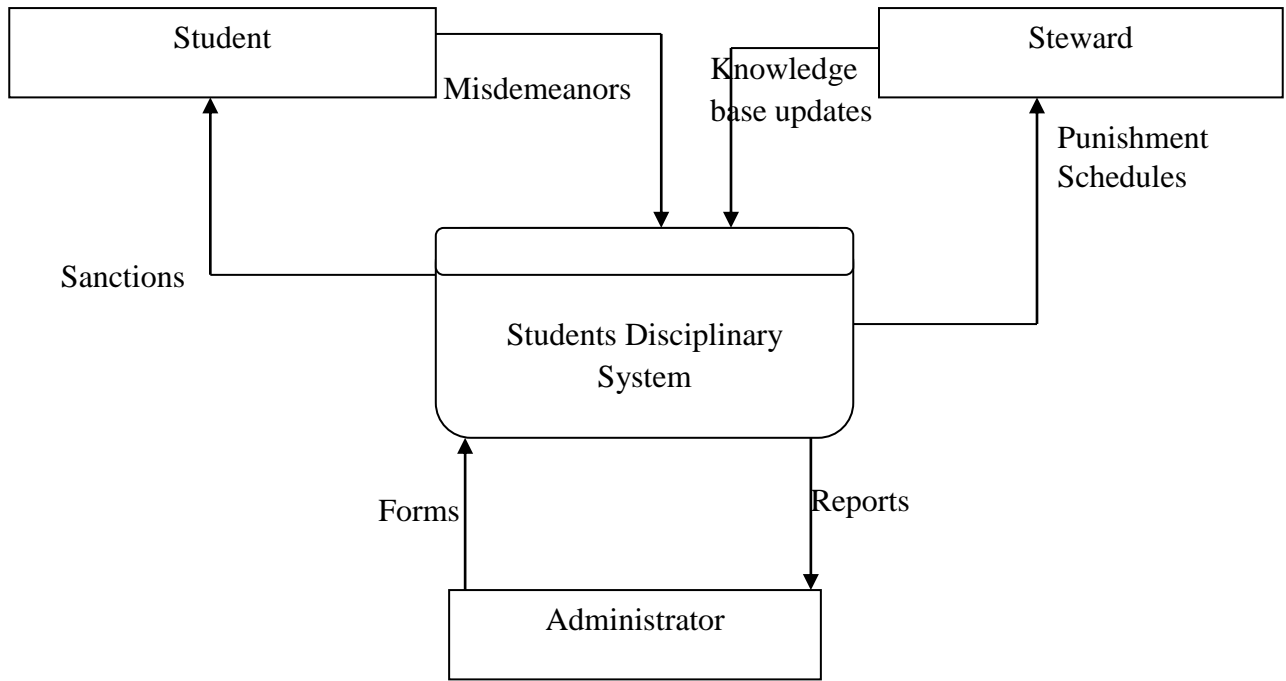
- User Details
- Students Details
- Sanctions List
- Misdemeanors List

4.2.2 System Processes

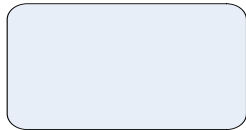
- getDetailsFromInputForms()
- compileMisdemeanors()
- allocateSanctions()
- createPunishmentSchedules()
- createSummaryChartsforCollegeBehaviorTrends()
- giveRecommendations()

4.2.3 System Outputs

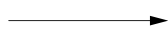
- Punishment Reports
- Reports for College behavior trends
- Recommendation Reports



Key:



Process



Data Flow



Entity

Figure 4.1 Context Diagram of the proposed system

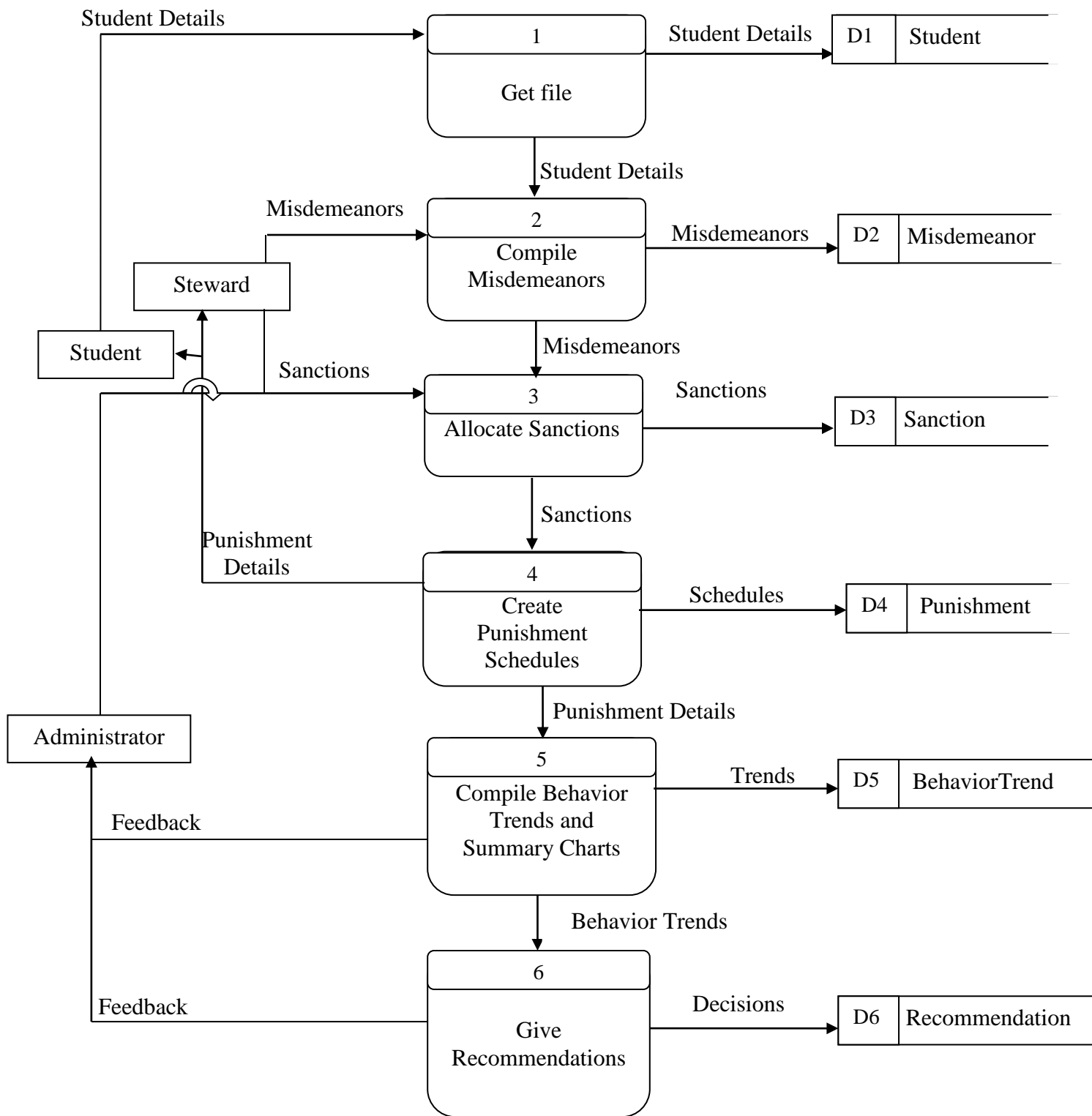
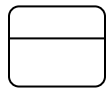
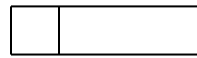


Figure 4.2 Data Flow Diagram of the Proposed System

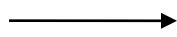
Key for DFD



Process



Data Storage



Data Flow



Physical Output

4.3 ARCHITECTURAL DESIGN

This is the design process for identifying the sub-systems making up a system and the framework for sub-system control and communication (Stafford, et al, 2010). Software architecture refers to the fundamental structures of a software system, the discipline of creating such structures, and the documentation of these structures. Each structure comprises software elements, relations among them, and properties of both elements and relations, along with rationale for the introduction and configuration of each element. The architecture of a software system is a metaphor, analogous to the architecture of a building (Bass et al, 2012).

The first step is to determine whether the system will be a stand-alone or a network based system (Client-server Architecture). Server based architecture builds the processing operations of the system into the server (Main Computer) and relegates all the other computers (in a typical network infrastructure) to clients (that is, those computers hiring the services of the server).

On the stand-alone model, all activities of initiating service requests (for data processing) and deploying the services are vested in a single computer that operates alone. Even if they are many computers in an organization, if it is a stand-alone system, the individual computers do not have any links; therefore, do not communicate with each other. The analyst shall compare the two models of architecture in the table below to select the suitable one.

Table 4.1 Comparison of client-server and stand-alone architectures.

Narration	Client-Server Network	Stand-Alone System
Installation Costs	High	Low
Operational Costs	Low	High
Resource Sharing	High	Low
Control and Security	High	Low
Room for Future Growth	High	Low

Taking the two architectures into account, the analyst has opted for the client-server based architecture.

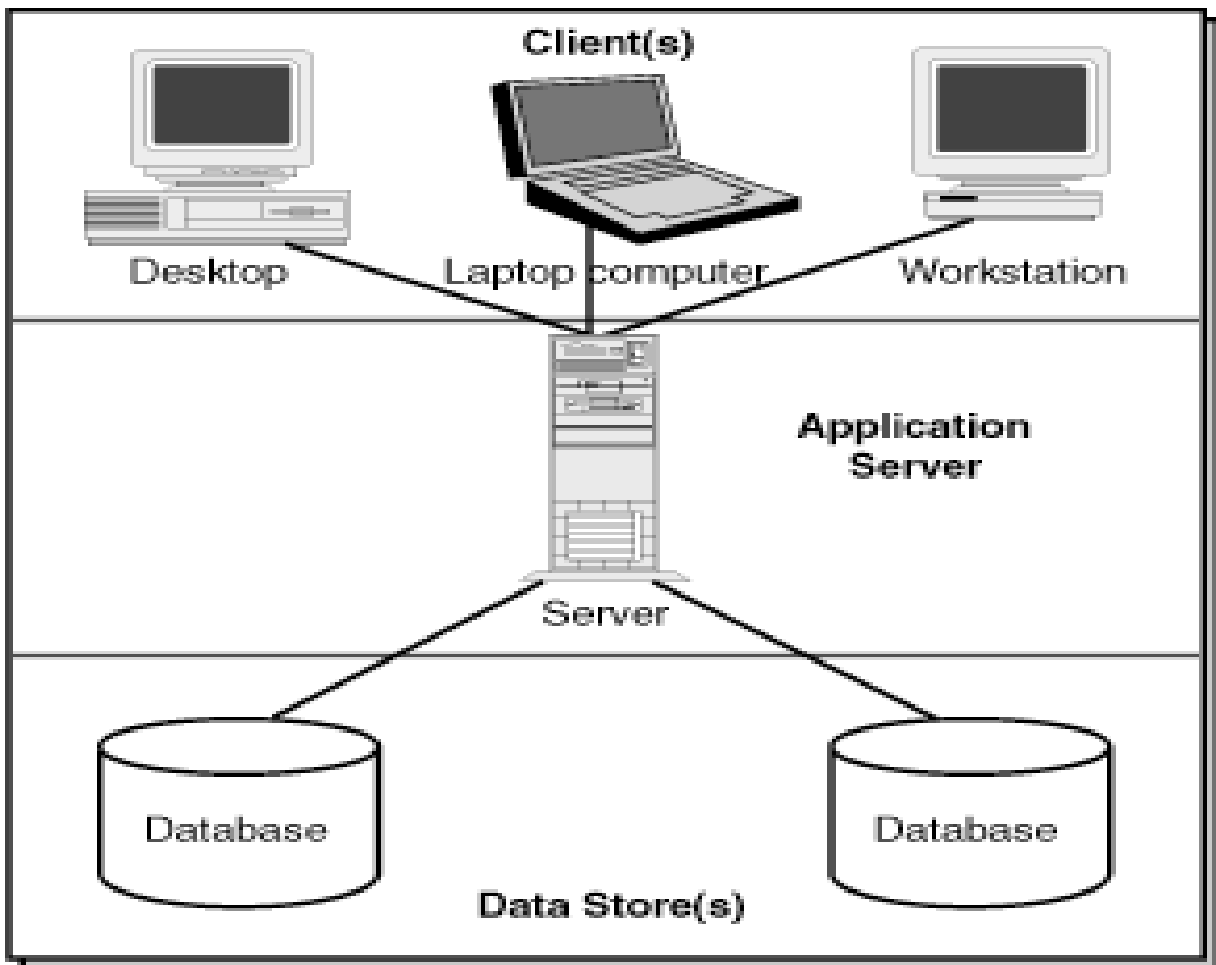


Figure 4.3 Network Architecture Design of the System

4.4 PHYSICAL DESIGN

The physical design relates to the actual input and output processes of the system. This is explained in terms of how data is input into a system, how it is verified / authenticated, how it is processed, and how it is displayed (Royce, 2010). It describes the technical environment of the proposed system which comprise of the hardware that is going to be used and the way it is structured, that is location of the hardware (servers, printers) and the way in which it is going to be networked (Benjamin and Wolt, 2010). The most important aspect is that of the interaction between the hardware and the software under development. The system will be integrated in an already existing infrastructure, the intranet. All the user machines will be connected to the database server, networked by a 50-port Cisco Switch and connected by a set of cables, namely UTP CAT 6, Fly leads and Patch codes.

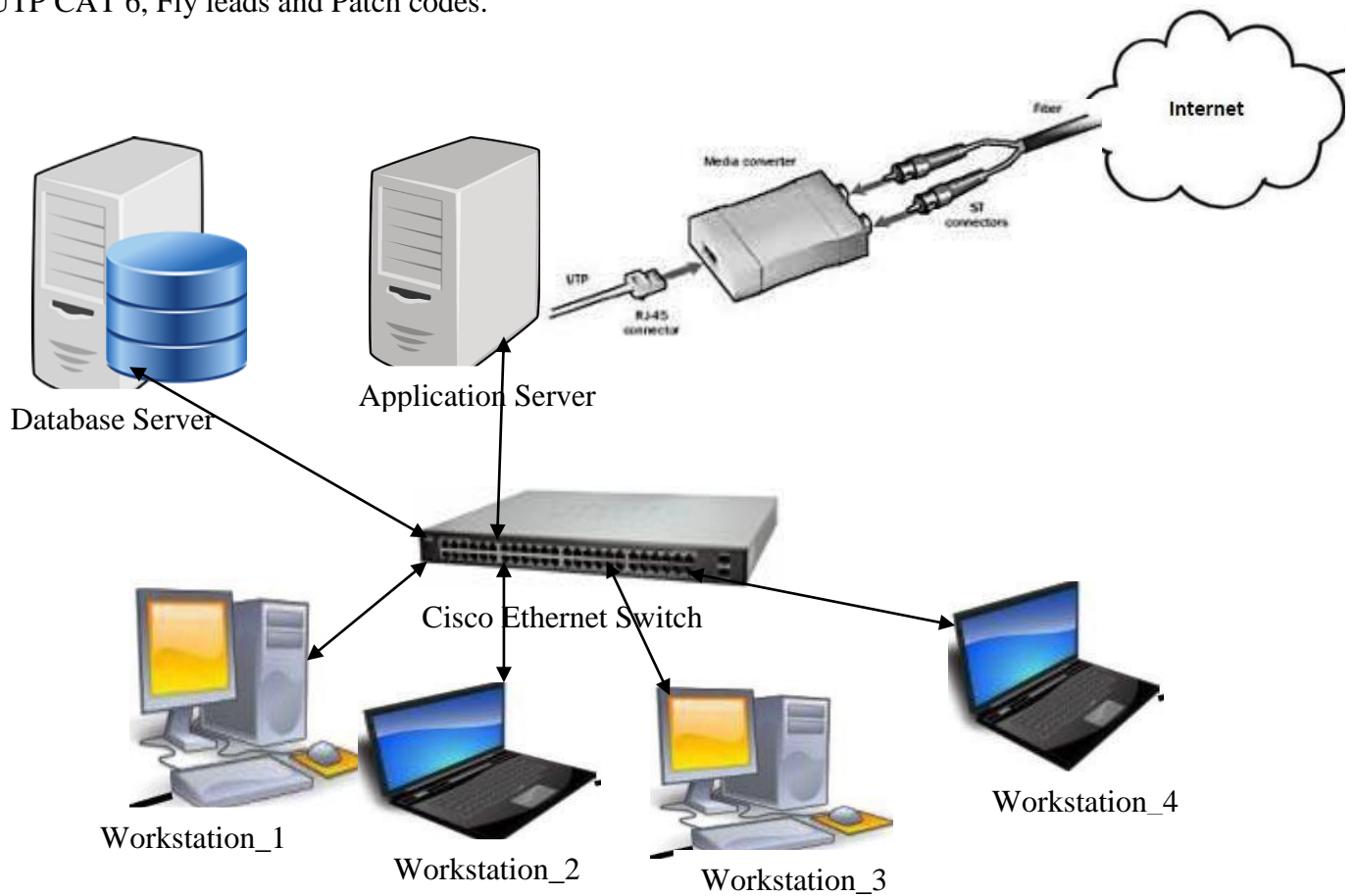


Figure 4.4 Physical View of the Client/Server Technology over the Internet

4.5 DATABASE DESIGN

Database design is the process of producing a detailed data model of a database. This data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a data definition language, which can then be used to create a database (Benyon, 2007). Architecture design refers to the arrangement of data in a database in the form of layers known as schemas (O'Brien and Marakas, 2011). There is the physical layer, the conceptual layer and the application layer. The three schemas are descriptive of data that exists at the physical level. The database management system (DBMS) must transform the requests made at the external schema against the conceptual schema and into the request on the internal schema over the stored database.

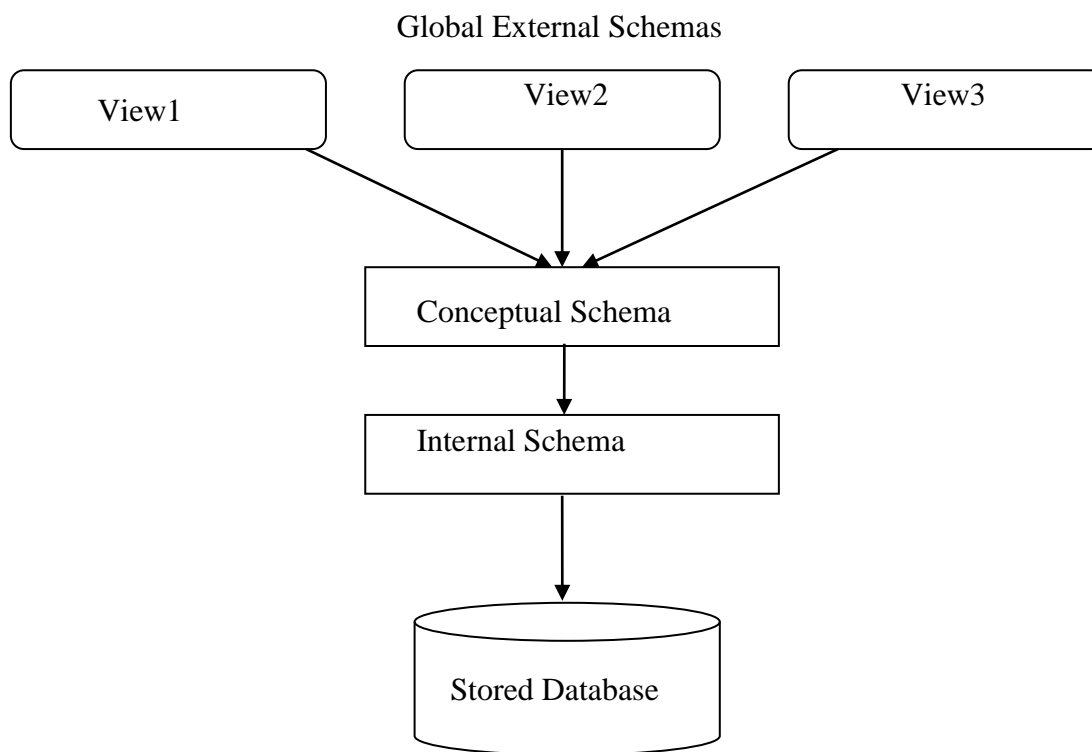


Figure 4.5 Database Architecture for the proposed System.

4.5.1 Database Abstraction Levels

According to Royce (2010), a database is full of records. What we see in rows and columns is quite different when it reaches the memory. What we see is the actual data. But when they are stored in the memory like disks or tapes, they are stored in the form of bits. But any users will not understand these bits. They need to see the actual data to understand. But all the details about the data stored in the memory are not necessary for the users. User only need little information that they are interested in or want to work with. Masking the unwanted data from the users happens at different levels in the database. This masking of data is called data abstraction. There are three levels of data abstraction:

4.5.1(a) Physical Level

According to Boehm (2011), the physical schema describes details of how data is stored: files, indices, etc. on the random access disk system. It also typically describes the record layout of files and type of files (hash, b-tree, flat). This is the lowest level of abstraction and defines how data is actually stored.

4.5.1(b) Conceptual Level

Also referred to as the Logical level, conceptual level hides detail of the physical level. In the relational model, conceptual schema presents data as a set of tables. This level describes the type of data that is actually stored in the database and the relationships that exist amongst the data (Balzer, Cheatham and Green, 2013). The data is stored in tables and a table's design describes what it stores, that is, the table attributes and specific data types (for example, integer, string and the exact size and format). The table's field name and data type are defined. Queries are also defined in this level and how they link with each other.

4.5.1(c) View Level

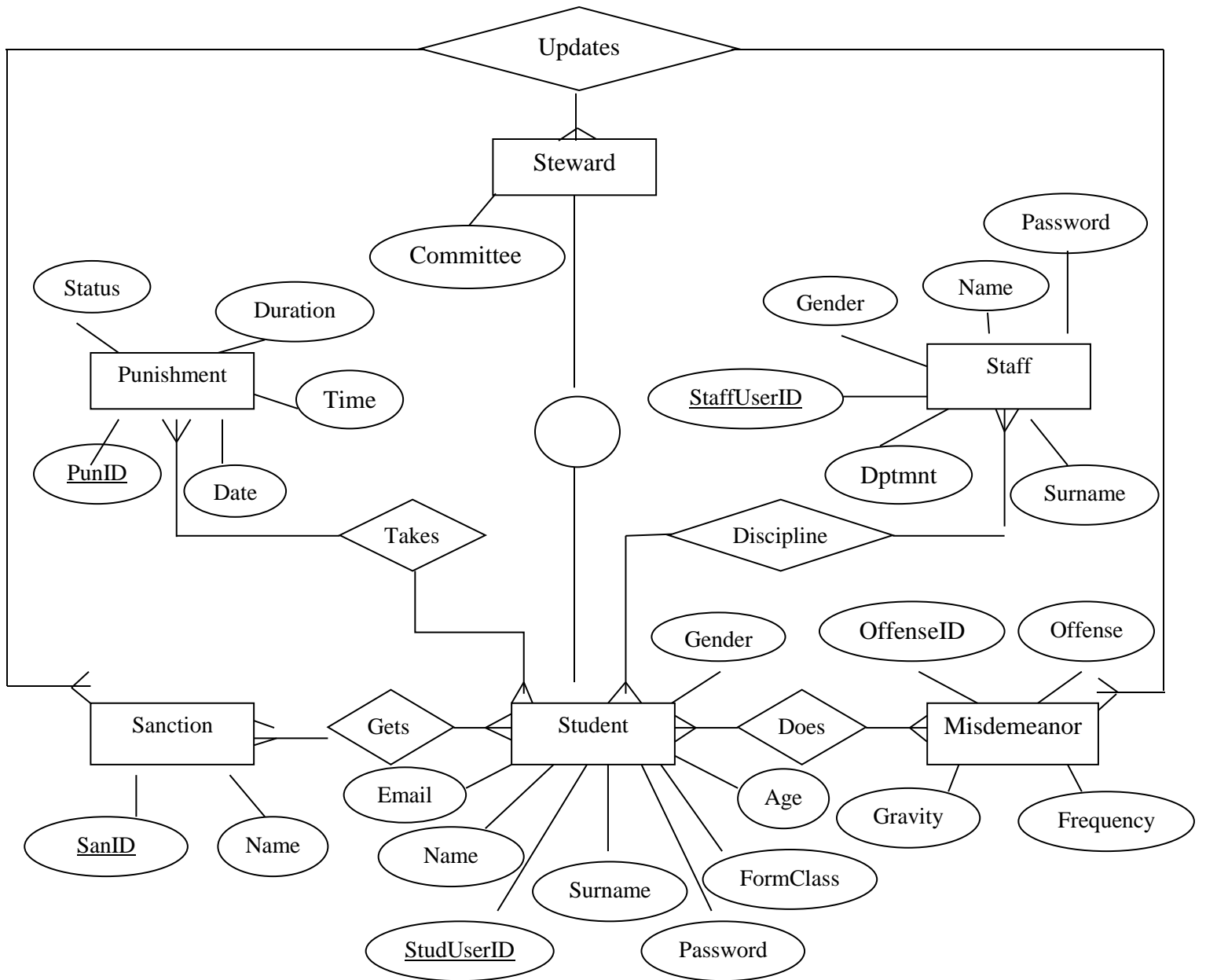
In the relational model, the external schema also presents data as a set of relations. An external schema specifies a **view** of the data in terms of the conceptual level. It is tailored to the needs of a particular category of users. Portions of stored data should not be seen by some users and begins to implement a level of security and simplifies the view for these users (Benjamin and Wolt, 2010). This level shows the highest level of abstraction. Its main aim is to simplify the

user's interaction with the database by provision of an interface that the user can simply manipulate (Bourgeois, 2014). The database records can be viewed using forms, reports and tables. The database manipulation is done using Structured Query Language (SQL). Possible relationships between tables in the given database are:

- One to One
- One to many

4.5.2 The Entity relationship diagram

An entity–relationship model (ER model) describes inter-related objects of interest in a specific domain of knowledge. An ER model is composed of entity types (which classify the objects of interest) and specifies relationships that can exist between instances of those entity types (Bass, Clements and Kazman, 2012). The Enhanced Entity Relationship Diagram (E-ERD) is the preferred logical data model to model the proposed system because of its pictorial approach and that it is an accurate depiction of the entities and their relationships (Royce, 2010). This shows the physical and logical arrangement structure for which the database will be like.



KEY:

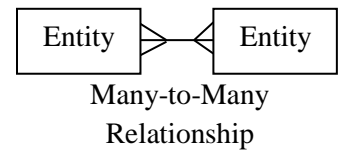
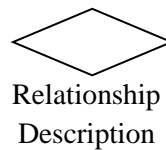
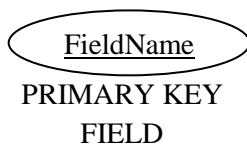
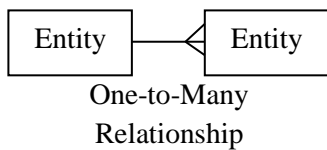


Figure 4.6 Enhanced Entity Relationship Diagram for the proposed System

4.5.3 Database Tables

A table is a collection of related data held in a structured format within a database. It consists of columns, and rows (Johnson, 2015). In relational databases, a table is a set of data elements (values) using a model of vertical columns (identifiable by name) and horizontal rows, the cell being the unit where a row and column intersect (Allen, 2010). The data stores of the proposed system will be in the form of database tables. The tables and their attributes are defined below:

Table 4.2 Student

FIELD NAME	DATA TYPE	DESCRIPTION
StudUserID(PRIMARY KEY)	Var_Char(50) NOT NULL	Unique login name for students
Surname	Var_Char(50)	Student's surname
Name	Var_Char(50)	Student's first name
Email	Var_Char(50)	Student's E-Mail address
Gender	Var_Char(10)	Male or Female
Age	Int	Student's age in years
FormClass	Var_Char(10)	Student's Form Class
Password	Var_Char(50)	Login Password

Table 4.3 Sanction

FIELD NAME	DATA TYPE	DESCRIPTION
SanID (PRIMARY KEY)	Int NOT NULL	Unique Identifier for sanction
Name	Var_Char(50)	Name of the imposed sanction
OffenseID (FOREIGN KEY)	Int NOT NULL	For linking two-different tables

Table 4.4 Misdemeanor

FIELD NAME	DATA TYPE	DESCRIPTION
OffenseID (PRIMARY KEY)	Int NOT NULL	Unique Identifier of the offense
Offense	Var_Char(50)	Description of the offense
Frequency	Int	Number of occurrence
Gravity	Var_Char(50)	Gravity of the offense committed

Table 4.5 Punishment

FIELD NAME	DATA TYPE	DESCRIPTION
PunID (PRIMARY KEY)	Int NOT NULL	Unique identifier for punishment
Date	Date	Scheduled date of punishment
Time	Time	Scheduled time of punishment
Duration	Double	Duration of manual labour hours
Status	Var_Char(20)	Pending, completed or abandoned
OffenseID (FOREIGN KEY)	Int NOT NULL	For linking two-different tables
StudUserID (FOREIGN KEY)	Var_Char(50) NOT NULL	For linking two-different tables
SanID (FOREIGN KEY)	Int NOT NULL	For linking two-different tables

Table 4.6 Staff

FIELD NAME	DATA TYPE	DESCRIPTION
StaffUserID (PRIMARY KEY)	Var_Char(50) NOT NULL	Staff's unique username
Surname	Var_Char(50)	Staff surname
Name	Var_Char(50)	Staff first name
Gender	Var_Char(10)	Male or Female
Password	Var_Char(50)	Login password
Dptmnt	Var_Char(50)	Staff's Department

4.6 PROGRAM DESIGN

Program design consists of the steps a programmer should take before they start coding in a specific language. It involves the design of the system modules and how they interact with each other using UML diagrams, which includes class, sequence and package diagrams (Ambler and Lines, 2012). When properly documented, the complete program is easier to maintain in future. The class diagrams and pseudo-code will be used for planning the program logic.

4.6.1 Package diagram

This shows the collection of the logically related UML elements (Stafford, 2010). The different classes within the online students' disciplinary system were grouped into packages to reduce the complexity and thus enabling us to have a better understanding of the System. The diagram below illustrates the packages within the system.

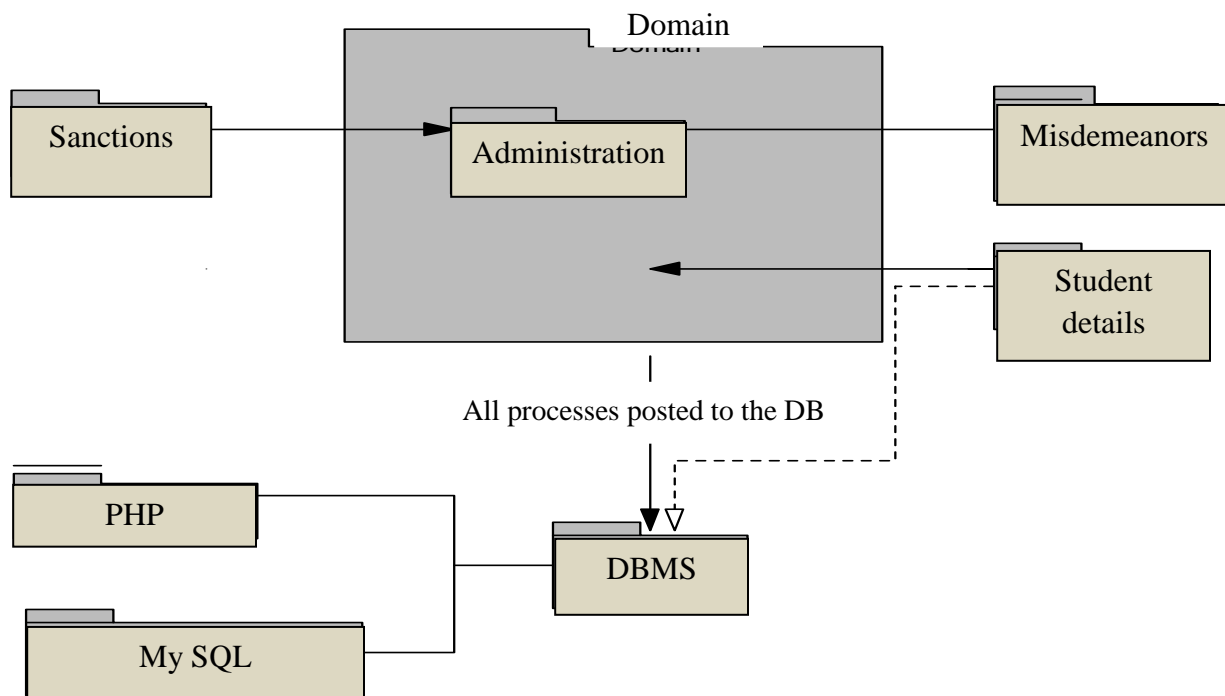


Figure 4.7 Package Diagram for the System

4.6.2 Class diagram

In software engineering, a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects (Benyon, 2007). This gives an overview of the online students' disciplinary system, illustrating its classes and the relationships involved. Basically it gives an outline of the interactions between various entities in the system.

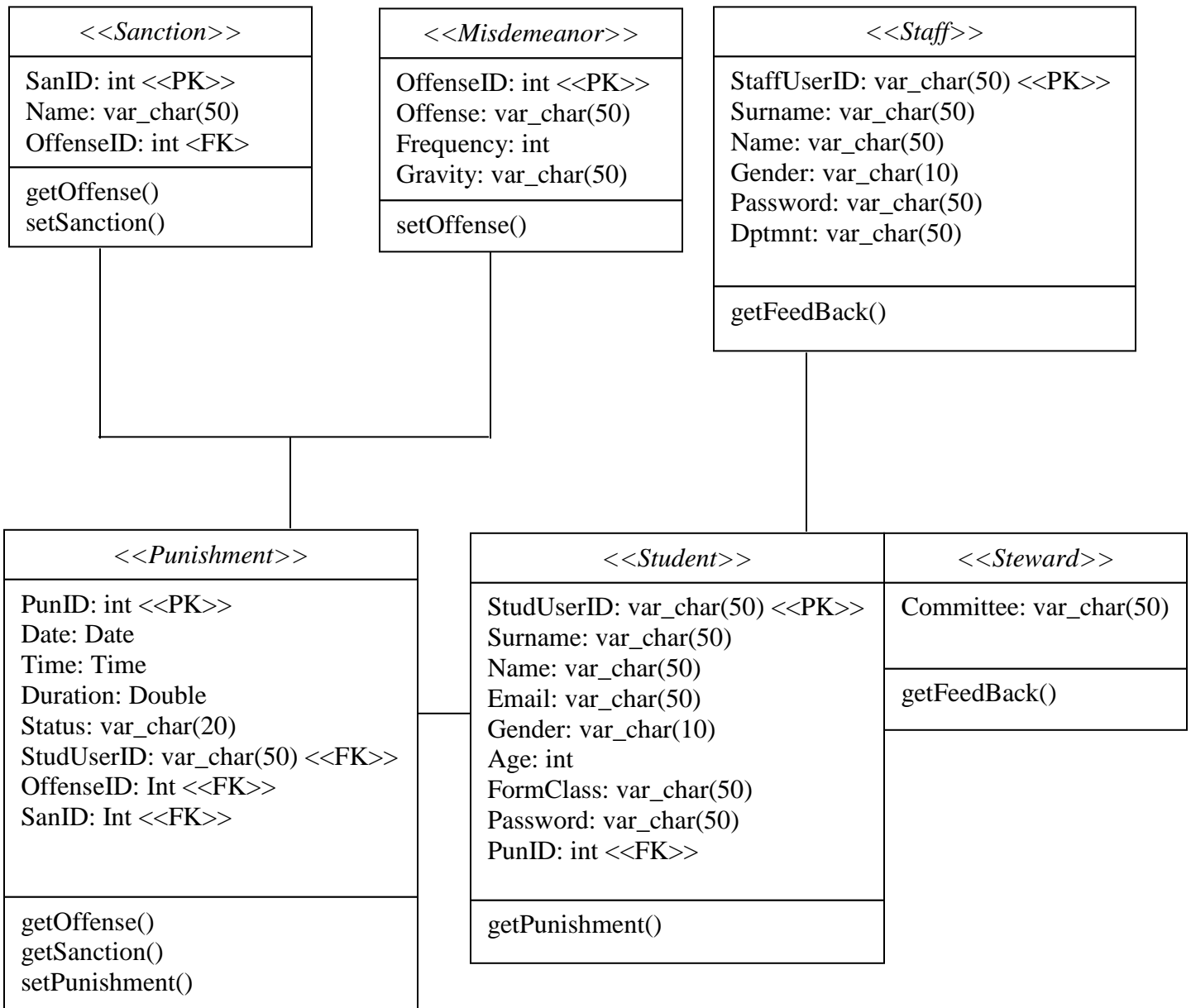


Figure 4.8 Class Diagram for the System

4.6.3 Sequence Diagram

The Sequence Diagram models the collaboration of objects based on a time sequence. It shows how the objects interact with others in a particular scenario of a use case (Boehm, 2010). Sequence diagrams describe interactions among classes in terms of an exchange of messages over time. They're also called event diagrams (Ambler and Lines, 2012). A sequence diagram is a good way to visualize and validate various runtime scenarios. These can help to predict how a system will behave and to discover responsibilities a class may need to have in the process of modeling a new system.

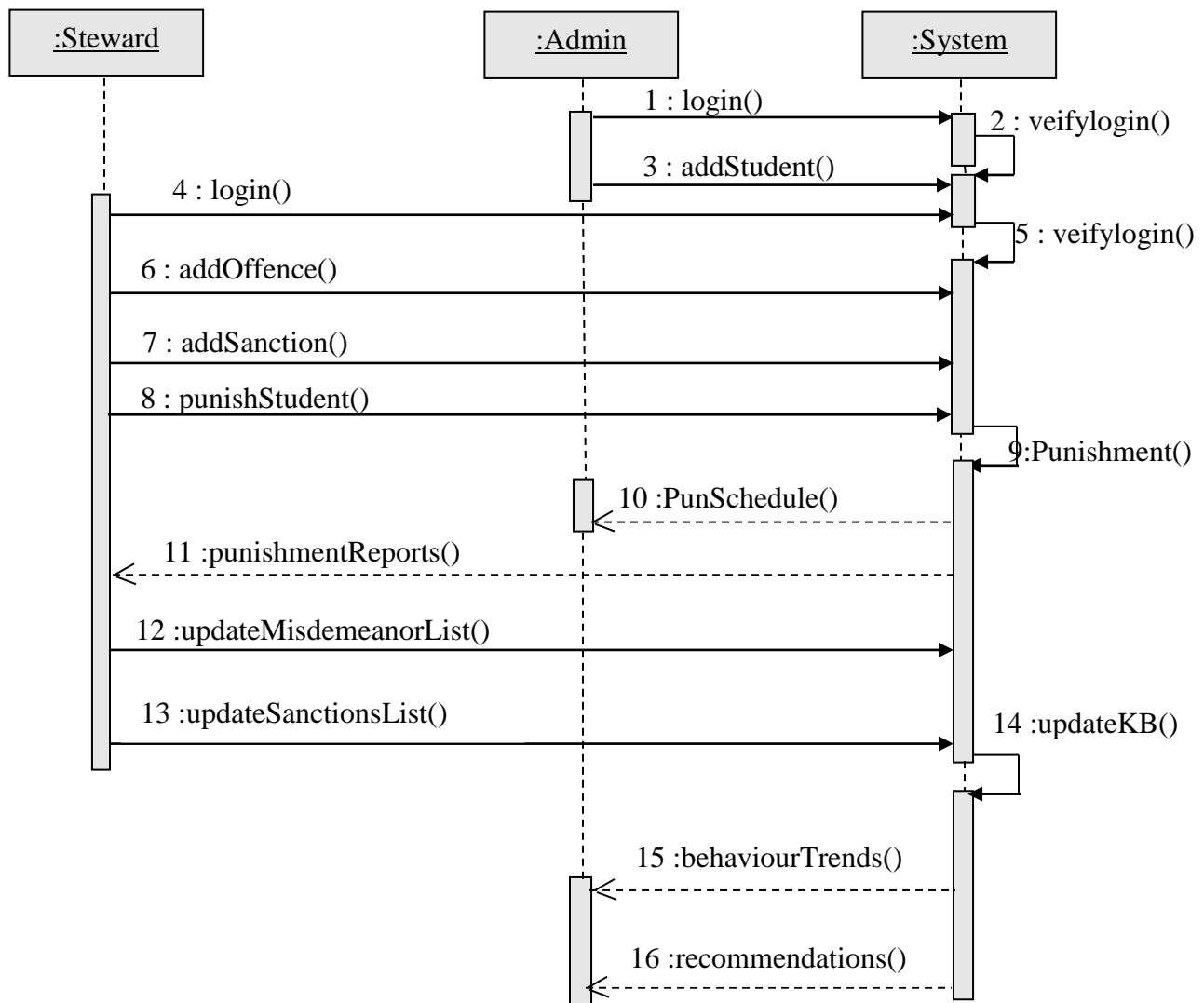


Figure 4.9 Sequence Diagram for the System

4.6.4 Coding

The system design needs to be implemented to make it a workable system. This demands the coding of design into computer language, i.e., programming language. This is also called the programming phase in which the programmer converts the program specifications into computer instructions, which we refer to as programs (Royce, 2010). It is an important stage where the defined procedures are transformed into control specifications by the help of a computer language. The programs coordinate the data movements and control the entire process in a system. A well written code reduces the testing and maintenance effort. It is generally felt that the programs must be modular in nature. This helps in fast development, maintenance and future changes, if required. Programming tools like compilers, interpreters and language like PHP, C++, and Java are used for coding, with respect to the type of application. The right programming language should be chosen. The actual code of the system will be in the Appendix F. This phase will show the pseudo code of the proposed system.

4.6.4(a) Pseudocode

Pseudo code is a tool for planning, defining, or documenting the contents of a program routine or module (Balzer, Cheatham and Green, 2013). The pseudo code involved in this phase is as follows:

- Login
- Registration

Login

```
Enter username and password
    If username and password are correct
        Open the main menu
    Else
        Register newuser
End
```

Registration

Enter required user details

Validate user input

 If input is invalid

 Display error

 Else

 Save input data using existing connection

 Display confirmation

End

4.7 INTERFACE DESIGN

User Interface design (UI) or user interface engineering is the design of user interfaces for machines and software, such as computers, home appliances, mobile devices, and other electronic devices, with the focus on maximizing usability and the user experience (Bourgeois, 2014). This is a process of designing how the system will interact with the external entities (Sward, 2006). The designer focuses on the design of user interface, the nature of main menu, menu designs input, and outputs in the system, ways of accepting data and producing information. The researcher intends to design web pages to be used by system users to input information into the system before submitting the page to the server.

The following rules apply to input forms:

- Data will be validated on entry into the system.
- The tab/enter keys on the keyboards will be used to move to the next field for data input.

The area of Human Computer Interaction (**HCI**) was considered in coming up with the interface, and in this vein, a range of possible output presentations were considered.

4.7.1 User Interface

After considering **HCI** with respect to the online students' disciplinary system, and in addition, the level of technical expertise of the end users (which was found to be naïve) the researcher found it suiting to serve the interface on a **WIMPG** platter, that is, the interfacing will be based on graphical objects called Windows, Icons, and Pull Down Menus which translates to a Graphical User Interface (**GUI**) in general.

GUI is favorable to a **Command Driven Interface** because the screens are more intuitive to the end user hence more user friendly. Commands will be there on the screen, embedded in click buttons and menu options, as opposed to a scenario where the user should remember them in a command driven interface. Screens displaying from the chosen interface are more colourful, and attractive. Methods of operations can be made just like any other Windows Application, so learning the system will only be a natural progression from the common.

4.7.2 Input Design

Input Design is the process of converting a user-oriented description of the input into a computer-based system (Stafford et al, 2010). This is the design of input forms used by users to input data into the system. This shows the highest level of abstraction and hides the complexity of the system (Boehm, 2011). The overall goal for input design is to produce a user friendly interface, and to design input processes that ensure data quality, accuracy and timeliness (also fulfilling one of the major objectives – ‘Improving User Friendliness’).

Guidelines for Input Forms

The proposed system will make use of graphical 3D input forms. All these forms are going to be characterized by:

- Appropriate captions/titles are to be used,
- Consistent use of controls and colors. That is a single color theme is to be used throughout the system and a selected range of input controls (Text Boxes, Command Buttons, Data Combos, Data Grids...) are to be consistently used,
- To ensure consistent and appropriate guidelines of input to users, an extensive and exclusive use of tool tips is to be used. The use of status bars in collaboration with Text Boxes is to be adopted, that is as a user enters a data into any particular text box, the Status Bar must display some appropriate guideline information,
- Where input is known or if constant, for example, committed offenses, users are not to input the data from scratch, but to select from lists,
- To reduce input errors (thus improving data quality) data validations are to be taken care of during the input process,
- To ensure ease of use, simple and self-explanatory, constructive, consistent and polite messages are to be used throughout the processing of input,
- As each user inputs data, ensure that only valid data is input, where possible, for example, digits for phone numbers. Also enforce data uniformity (lower or upper cases).

The new proposed system will contain input forms that will allow Users to login to the system, input student data, staff data and enter misdemeanors and sanctions list into the system.

MCC Student Form

Student User ID:	<input type="text"/>
Surname:	<input type="text"/>
Name:	<input type="text"/>
Gender:	<input type="text"/>
E-Mail:	<input type="text"/>
Form Class:	<input type="text"/>

Figure 4.10 Student Form

MCC Staff Form

Staff User ID:	<input type="text"/>
Surname:	<input type="text"/>
Name:	<input type="text"/>
Gender:	<input type="text"/>
Password:	<input type="text"/>
Department:	<input type="text"/>

Figure 4.11 Staff Form

Misdemeanors List

Offence ID:

Offence:

Figure 4.12 Misdemeanours Form

Sanctions List

Sanction ID:

Sanction:

Figure 4.13 Sanctions Form

Punishment Report for Student

Offence Committed: Student Name:

Sanction: Labour Hours:

Date of Punishment: Time: Status:

Steward's Signature.....

Figure 4.14 Punishment Report

MCC STUDENTS - PUNISHMENT SCHEDULE REPORT

Date:	Student Name:	Sanction:	LbrHrs:	Time:	Status:

Steward’s Signature.....

Figure 4.15 Students’ Punishment Schedule Report

4.8 CONCLUSION

The design phase enabled the developer to come up with an interface of the new system. All the design was carried in the design phase. Inputs, processes and outputs of the new system were designed. There was also design of the flow of activities in the proposed system, which will assist in the coding and construction. During the design phase there was also some information gathering that was done in terms of asking the prospective users of what they expect in the proposed system. This valuable information helped in the designing of input and output components of the system. The consultations were conducted to avoid a software crisis where the delivered system software fails to meet the user expectations, which might cause user frustration. The completion of the design phase paved the way for the implementation phase.

CHAPTER 5

IMPLEMENTATION PHASE

5.1 INTRODUCTION

After having completed the design stage, the proposed system needs to be implemented. The Implementation Phase has one key activity: deploying the new system in its target environment. Supporting actions include training end-users and preparing to turn the system over to maintenance personnel. After this phase, the system enters the Operations and Maintenance Phase for the remainder of the system's operational life. Multiple-release projects require multiple iterations of the Implementation Phase – one for each release (O'Brien and Marakas, 2011).

The implementation phase entails the transformation of the design phase into a logic that is understandable to the computer (Boehm et al., 2012). This involves the following:

- Testing
- Installation
- Maintenance

At this stage, the system is a prototype, and when it has been fully tested, then it can be installed and be ready for use. The database is to be set up on the administrators' machine, which will act as the Server during the testing process. The other machines on the network will act as the client machines. This phase is where the process of testing and coding programs that are part of the system was carried out. It involves the development of quality assurance procedures including data security, backups and recovery (Polak and Green, 2015). It trains users how to use the new system.

5.2 SYSTEM TESTING

System testing is the process of performing a variety of tests on a system to explore functionality or to identify problems in a system (Sward, 2006). Before actually implementing the new system into operations, a test run of the system is done removing all the bugs, if any. It is an important phase of a successful system. After codifying the whole programs of the system, a test plan should be developed and run on a given set of test data (Boehm et al., 2012). The output of the test run should match the expected results. After the system construction, system testing was done in collaboration with its expected end users. The application designed went through a series of tests to ensure that all modules in the program are functioning correctly.

The test was done comparing the conceptual model and the coding. The first step was to detect any syntax errors in the program, debug them and then obtain a clean compilation. After a successful compilation, the program was run to see its functionality. The second step was to eliminate logical errors in the program. This was done to ensure that the program was semantically sound and well structured. The final step was to test unit, link and system. Testing was also done to ensure user acceptance of the designed application, hence the need for user involvement in design and verification.

5.2.1 Testing Process

The testing process was carried out to detect errors and correct the identified errors. The system went through a series of tests to ensure that all the modules in the system are working. Testing was also done to ensure that users accept the system and that the system was delivered without errors. These tests were also applied in the verification and validation of the system.

5.2.1 (a) Actual System Testing

The following testing process was used to verify and validate that the system is working perfectly and fulfilling the stated objectives:

- Unit testing
- System testing
- Acceptance testing

The diagram below shows the testing process;

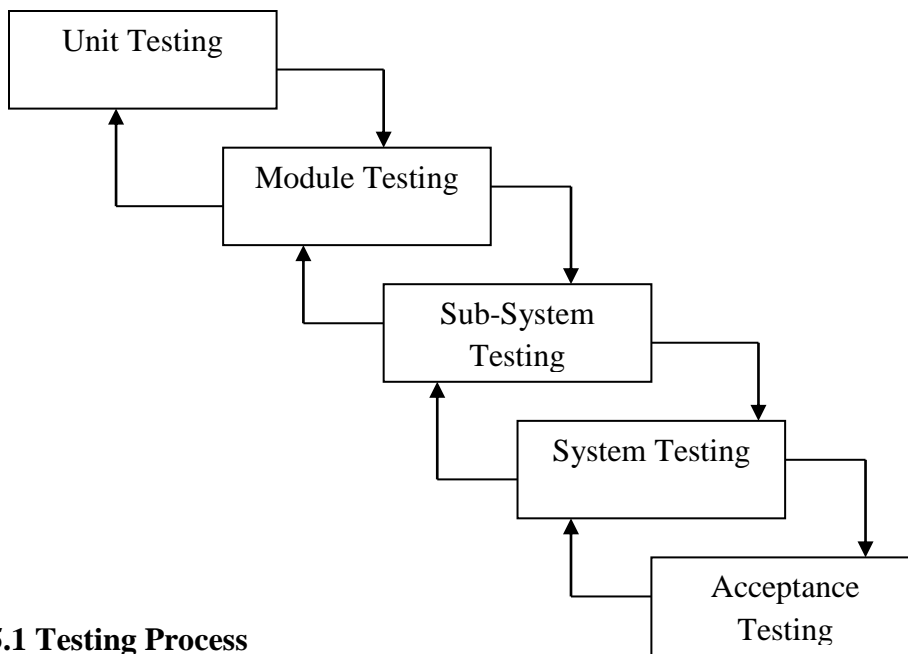


Figure 5.1 Testing Process

5.2.1 (b) Unit Testing

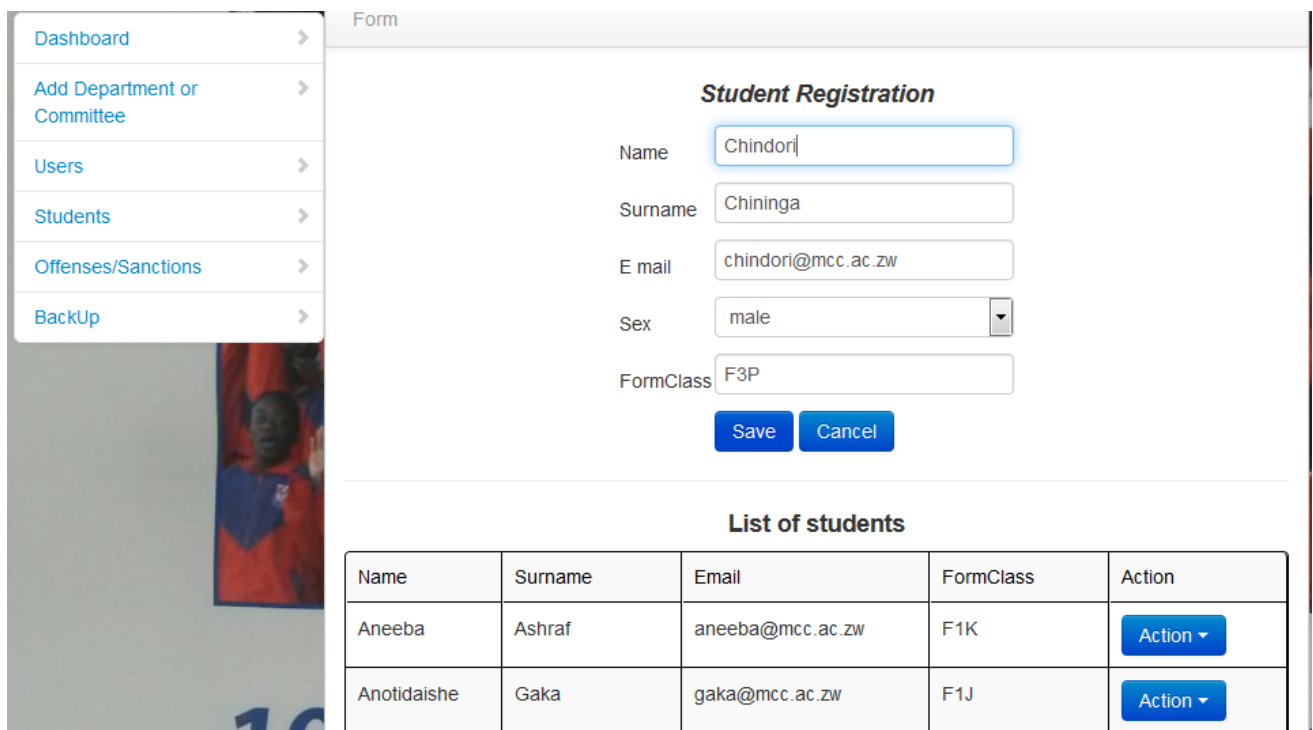
Unit testing is a software development process in which the smallest testable parts of an application, called units, are individually and independently scrutinized for proper operation (Royce, 2010). These units involve the text boxes for validation or the code that is responsible for validating the unit.

White box testing

White-box testing (also known as clear box testing, glass box testing, transparent box testing, and structural testing) is a method of testing software that tests internal structures or workings of an application, as opposed to its functionality (i.e. black-box testing). In white-box testing an internal perspective of the system, as well as programming skills, are used to design test cases. The tester chooses inputs to exercise paths through the code and determine the appropriate outputs (Binder, 2010). This focuses on the inner working detail of a unit and helps identify errors not easily identifiable by black box testing.

Black box testing

This is a method of software testing that examines the functionality of an application without peering into its internal structures or workings. This method of test can be applied to virtually every level of software testing: unit, integration, system and acceptance (Binder, 2010). It typically comprises most of, if not all higher level testing, but can also dominate unit testing as well. This concentrates on the inputs and outputs only of a unit. Here tests were done on the student registration module, which successfully captured student details and then showed the success page.



The screenshot shows a web application interface. On the left is a navigation menu with items: Dashboard, Add Department or Committee, Users, Students, Offenses/Sanctions, and BackUp. The main content area is titled 'Form' and contains a 'Student Registration' form. The form fields are: Name (Chindori), Surname (Chininga), E mail (chindori@mcc.ac.zw), Sex (male), and FormClass (F3P). There are 'Save' and 'Cancel' buttons. Below the form is a 'List of students' table with two rows of student data.

Name	Surname	Email	FormClass	Action
Aneeba	Ashraf	aneeba@mcc.ac.zw	F1K	Action ▾
Anotidaishe	Gaka	gaka@mcc.ac.zw	F1J	Action ▾

Figure 5.2 Student Registration form

5.2.1(c) Module Testing

Testing directed to a single module or unit is called module or unit testing. It consists of test planning, test data development, test monitoring and execution, and evaluation of results (Boehm, et al., 2012). The module is made up of several functions which cooperate with each other. A collection of procedures and functions are tested. The following shows system objectives and their corresponding results;

Objective 1: To develop a system that **electronically allocates sanctions to students** for various misdemeanors committed.

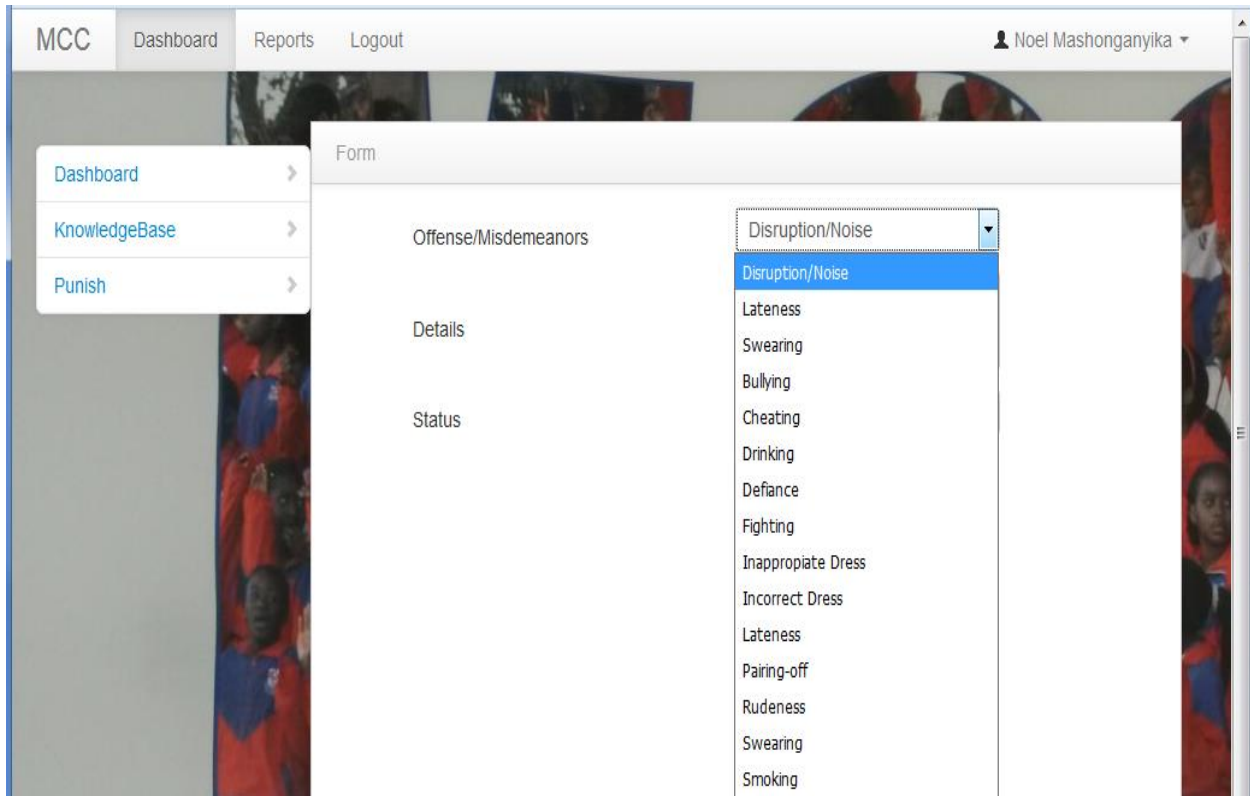


Figure 5.3 Punish Method

The above figure shows a system User (Steward), who is logged on and they want to punish a certain student. They click on the “Punish” menu option and the system displays a list of students at College. There is a “Punish Student” button that a User clicks and it will give the above displayed window. All that the User will do is select a particular offense or misdemeanor from the drop-down list which that particular student would have committed and the system will automatically allocate one sanction that corresponds to the committed offense.

Objective 2: The system should **ensure that no pupils erroneously escape punishments** by keeping track of **status** of the sanctions imposed on students (that is Pending/Incomplete and Complete).

Search

name	surname	email	offense	sanction	duration	punishmentdate	status
Tinotenda	Chairuka	chairuka@mcc.ac.zw	Lateness	Manual Labour	1	04/23/2017	Pending
Kundai	Chiwara	ckundai@mcc.ac.zw	Vandalism	Manual Labour plus payment of equipment!	1	04/23/2017	Pending
Jimmy	Gazimbi	jimmy@mcc.ac.zw	Lateness	Manual Labour	1	04/23/2017	Pending
Denzel	Washington	denz@mcc.ac.zw	Bullying	Manual Labour plus Counselling	3	04/23/2017	Pending
Kudzai	Chikwari	chikwari@mcc.ac.zw	Swearing	Manual Labour	2	04/23/2017	Pending
Nkosinhle	Gwizi	nkosinhle@mcc.ac.zw	Lateness	Manual Labour	1	04/23/2017	Pending

Grand Summary (6 detail records)

Figure 5.4 Punishment Status

Status for the punishments will automatically change to “Complete” on the next day after punishment date. If for some reason a student did not manage to carry out the expected punishment on the allocated date, Stewards make follow-ups on punishments, and they will have to re-allocate the same punishment to that particular student on the next day.

Objective 3: System will ensure no double booking of punishments for students for the various offences committed.

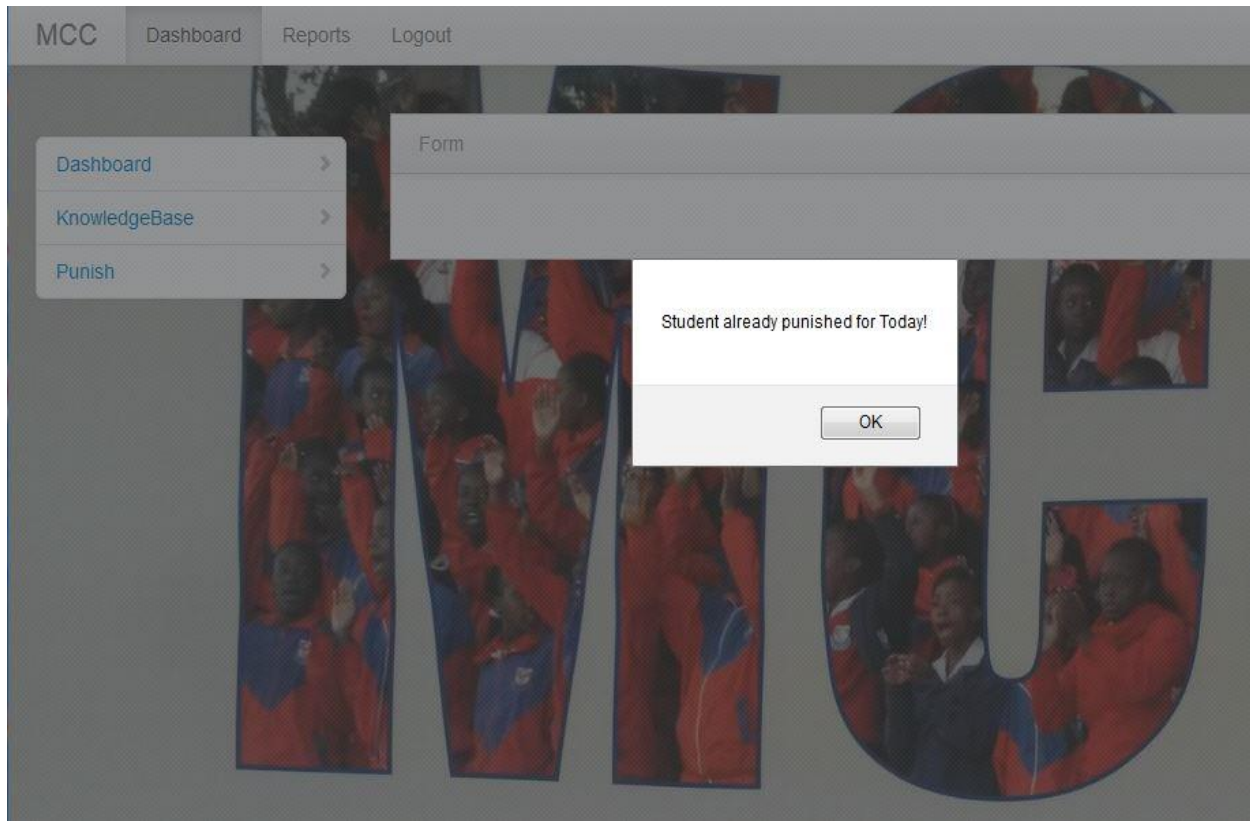


Figure 5.5 Punish Student

The “Punish Student” action button will be disabled once a student gets punished for the day. That means no more punishment allocations will be possible for that particular student until the next day, when the action button will automatically be enabled.

Objective 4: Ensure system gives unbiased sanctions and awards to students for various offences committed by disabling manipulation of system decisions by Users.

The screenshot shows a web application interface with a navigation bar at the top containing 'MCC', 'Dashboard', 'Reports', and 'Logout'. A user profile 'Noel Mashonganyika' is visible in the top right. A sidebar menu on the left includes 'Dashboard', 'KnowledgeBase', and 'Punish'. A modal window titled 'Form' is open, containing the following fields:

- Offense/Misdemeanors:** A dropdown menu with 'Rudeness' selected.
- Details:** A text area containing the text 'Student was rude to the teacher during Geography lesson.'
- Status:** A dropdown menu with 'Pending' selected.

At the bottom of the form are two buttons: 'Save' and 'Cancel'.

Figure 5.6 Disabling System Decisions

For example, Users cannot enter anything on the **Status** field for punishment allocations because that decision is handled by the system functionality. So when punishment allocations are done, Users can only select offense committed by a student, add some details about the offense and click **Save** button. The system will then automatically impose a sanction for the committed offense and show these under system reports.

Objective 5: The Expert System should help College Administrators **effectively manage and control student behavior** by displaying (on the system dash-board) summary charts and graphs of misdemeanor trends at College.



Figure 5.7 Trending Cases at College

5.2.1 (d) Subsystem Testing

Testing of integrated modules to verify combined functionality after integration. Modules are typically code modules, individual applications, client and server applications on a network, etcetera. This type of testing is especially relevant to client/server and distributed systems (Royce, 2010). There is detection of interface mismatches between programs. The modules, which are linked together, were tested. A collection of modules integrated into subsystems were tested for functionality and the results would review some errors that were not noted before.

5.2.1 (e) System Testing

System testing is conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements (Binder, 2010). System testing falls within the scope of black box testing, and as such, should require no knowledge of the inner design of the code or logic. As a rule, system testing takes, as its input, all of the integrated software components that have successfully passed integration testing and also the software system itself. The purpose of integration testing is to detect any inconsistencies between the system units that are put together (Balzer, et al, 2013). It seeks to detect defects both within the system as a whole. Live data is used and there is verification that the system works correctly.

5.2.1 (f) Acceptance Testing

This is the final stage before the system is accepted for practical use. This is where we discover errors and omissions in the system requirements definition. This stage will be continued until the developer and the customer agree that the developed system is acceptable for the system requirements (O'Brien and Marakas, 2011). The intended user of the partially automated system normally does this testing. It is also done so as to make sure that the system is working as per user requirements specifications (Sward, 2006). The intended user will be called in to have a feel of the actual finished system whether it is doing as s/he had previously specified.

5.2.1 (g) Verification

Verification answers the question; Are we building the system right? This is concerned with whether the system built is the right product. It is concerned with whether the system is well-engineered, error-free, and so on (Polak and Green, 2015). It includes all the activities associated with the producing high quality software: testing, inspection, design analysis, specification analysis, and so on. It is a relatively objective process, in that if the various products and documents are expressed precisely enough, no subjective judgements should be needed in order to verify software. Verification will help to determine whether the software is of high quality, but it will not ensure that the system is useful (Royce, 2010). The system might be excellent (running and fully functional) but not suitable for the situation requiring it. The developed system went through a series of tests with the objective of detecting errors and then correcting the identified errors. This process was to ensure that the system would be delivered for final use without errors.

5.2.1(h) Validation

Validation answers the question; Are we building the right system? It is concerned with building the right system and evaluating whether it is meeting the organizational needs and objectives (Polak and Green, 2015). In other words, validation is concerned with checking that the system will meet the customer's actual needs. Validation is an extremely subjective process. It involves making subjective assessments of how well the (proposed) system addresses a real-world need. Validation includes activities such as requirements modelling, prototyping and user evaluation (Sward, 2006). Within the proposed system, there was a testing of the system to check whether the defined objectives were met. The User Acceptance Test yielded positive results with all System Users nodding their heads after testing. They nodded their heads in acceptance during the Acceptance Tests, and this just goes to prove that the built system was the right product.

5.2.1 (i) System Security

As computing systems become more essential to our daily lives, it becomes ever more important that the services they provide are available whenever we need them. We must also be able to rely on the integrity of the systems, and thus the information that they hold and provide (Royce, 2010). Security is an important aspect to be considered in system development and it is one of the main objectives of the system, which will be catered for in the following ways:

5.2.1 (j) Back Up Plan

Backup is a process in which the state, files and data of a computer system are duplicated to be used as a backup or data substitute when the primary system data is corrupted, deleted or lost (Polak and Green, 2015). System back up is as follows:

- System backup
- Database backup

5.2.1 (k) System Backup

A system backup is the process of backing up the operating system, applications and system-specific useful/essential data (Balzer, Cheatham and Green, 2013). The system must have an independent backup for when there is need to reinstall the system. There should be backup for the system to be reinstalled in the event that there is a malfunction.

5.2.1 (I) Database Backup

Database backup is the process of backing up the operational state, architecture and stored data of database software. It enables the creation of a duplicate instance or copy of a database in case the primary database crashes, is corrupted or is lost (Binder, 2010). Database backup was done using the following stages;

- Primary backup,
- Secondary backup – the use of backup media and offsite backup.

5.3 INSTALLATION

Installation (or setup) of a computer program, is the act of making the program ready for execution. Installation typically involves code being copied / generated from the installation files to new files on the local computer for easier access by the operating system (Binder, 2010). This completes and evaluates the system implementation phase and the new system will be ready for use. After testing it can be installed because it will now be ready for use as indicated in the design section.

Steps involved:

Create new system folder with all the application scripts, (i.e. php-files) for the mcc system in the following file path; C:\xampp\htdocs\mcc. To run the system, ensure that Apache and MySQL are running in the XAMPP control panel. Open your browser software and type the following in the address bar; localhost/mcc. Press enter key to open System Log-in page.

5.3.1 Conversion

Some writers use conversion to refer only to the technological (IT) aspects, calling either the human side or the entire process “implementation” (Royce, 2010). Here “conversion” will refer to the entire process. After the system is completely tested and approved by the final users, it shall be installed. As it is replacing an already present and functional system, a replacement strategy has to be adopted that will ensure that there is no interruption of the normal activities. Four types of system conversion have been considered before deciding which one to apply:

- Parallel Running
- Direct Change over
- Pilot Conversion
- Phased Conversion

5.3.1 (a) Parallel Running

The new system is introduced while the old one is still in use. Both systems process all activity and the results are compared. Once there is confidence that the new one operates properly, the old one is shut down (Binder, 2010). This is done because if the new system fails, we can easily revert to the old system. When the users are familiar with the new system, then a complete conversion to the new system will be done.

Advantages of parallel running

- Errors can be identified and corrected before the old system is replaced.
- The difference between the new system and the old system can be seen by comparing their results and operations.
- Day to day operations of the organization are not disturbed even if the new system has problems.

Disadvantage of parallel conversion

- It is too expensive to operate two systems at the same time since it demands a lot of resources.

5.3.1 (b) Direct Change-over

This is when an entire organization stops using the old system at one time and begins using the new one immediately thereafter. The organization ends one day using the old system, begins the next day with the new. This is the riskiest method: Boehm, et al., (2012). It can also be used where the existing system is immediately abandoned as the new system becomes operational.

Advantage of direct changeover

- Costs are relatively low because only one system option is operational.

Disadvantage of direct changeover

- Highly risky because there is no backup option.

5.3.1 (c) Pilot Conversion

Part of an organization uses the new system while the rest of it continues to use the old. This localizes problems to the pilot group so support resources can focus on it (Royce, 2010).

Advantages of Pilot Conversion

- Cost is relatively moderate because only one location runs both systems,
- Errors and shortcomings can both be identified before a fully-fledged implementation,
- Risk is also moderate because the new system is installed only at a pilot site and the risk of failure is reduced.

Disadvantages of Pilot Conversion

- When system is fully acceptable at a pilot site, it might not be acceptable to the other branches of the organization.
- Also there can be interface issues where organizational units / departments share data.

5.3.1 (d) Phased Changeover

With phased changeover the system is implemented in stages or modules across the organization or departments. There may be computerization of certain modules that may be implemented, if successful, new phases are introduced and integrated until there is full computerization (Balzer, Cheatham and Green, 2013).

Advantages of Phased Changeover

- Costs are moderate because the system is implemented in stages rather than the whole system at once.
- Risk is also relatively low because the risk is limited to the module being implemented.

Disadvantage of Phased Changeover

- There can be interface issues where modules share data.

5.3.2 Recommendations

The method that is going to be adopted during the conversion period in the completion of the system development is parallel conversion. This method is mostly suitable because the current system will be running parallel to the new system. It means that if the new system fails to perform, the College can as well revert or continue using the current system while anomalies of the new system are being dealt with.

During this period, end users will be working on entering current system data into the new system. The conversion period will also allow the end users to gain familiarity with the new system. After all data in the existing system has been input in the new system, the old and the new system will now work in parallel mode. This will go for three months until users are satisfied that the new system no longer has anomalies. The old system will then be discarded also when the users feel they can now work with the new system without any problems.

5.3.3 Training

Training is the process by which people gain tangible skills that they can start applying immediately (Royce, 2010). Training of the end users is one of the most important steps for a successful system implementation. The end users should be utilized during parallel testing, so training will need to be rolled out prior to that. Getting the end users involved at this point is also a good way to get them excited about the system, as many of them may not have been involved with the project prior to training. Their assistance in parallel testing will help them prepare for when the system goes live. End users are good at using the system in more of a "real world"

situation and can judge when process flows are not working (O'Brien and Marakas, 2011). When everyone involved with using the system is included in the training, they will feel more confident about using it as they go into production and the user community will view the implementation as successful.

The analyst will do the training to users of the new system. Training is very important since the users of the system will need to know in-depth operations of the system that they will be working with. The Analyst will demonstrate the procedures for prompting the passwords, entering data, updating records. A user manual will be given for reference so that they will operate the system with little or no difficulties.

Strategies used in training

A scalable end-user training strategy will make your new software deployment both a more cost effective and a happier experience for everyone involved (Wiley, 2014). Strategies used in end-user training include;

- Demonstrations of the operations,
- Using the user documentation (User Manual),
- Training by the hearing, seeing and doing.

Demonstrations, as a training technique, were preferred the most by Users. These demonstrations were based much on what to do at each stage of the system and also what to do when faced with a particular situation such as when a message box with an error message appears on the screen. Some of the training techniques used included the learning by hearing, seeing and doing some operations on the system. When the training session was complete, a full-scale simulation was conducted for users to gain confidence and experience in using the system. The results of the training exercise were good as the users' actions and responses suggested that they had fully understood the system operations.

5.4 MAINTENANCE

In software engineering, software maintenance is the process of enhancing and optimizing deployed software (software release), as well as remedying defects: Wiley, (2014). Software maintenance is one of the phases in the software development process, and follows deployment of the software into the field. The software maintenance phase involves changes to the software in order to correct defects and deficiencies found during field usage as well as the addition of new functionalities to improve the software's usability and applicability.

5.5 CONCLUSION

The system went through a variety of testing strategies to prepare it for full installation and operation. After the tests, it could be judged that the system was fit for installation and use. During the lifetime of its operation, various maintenance strategies were also put in place to ensure that the system will operate in line with changing user requirements and technological advancements. It was concluded that the new system is a solution to the problems being faced at Midlands Christian College.

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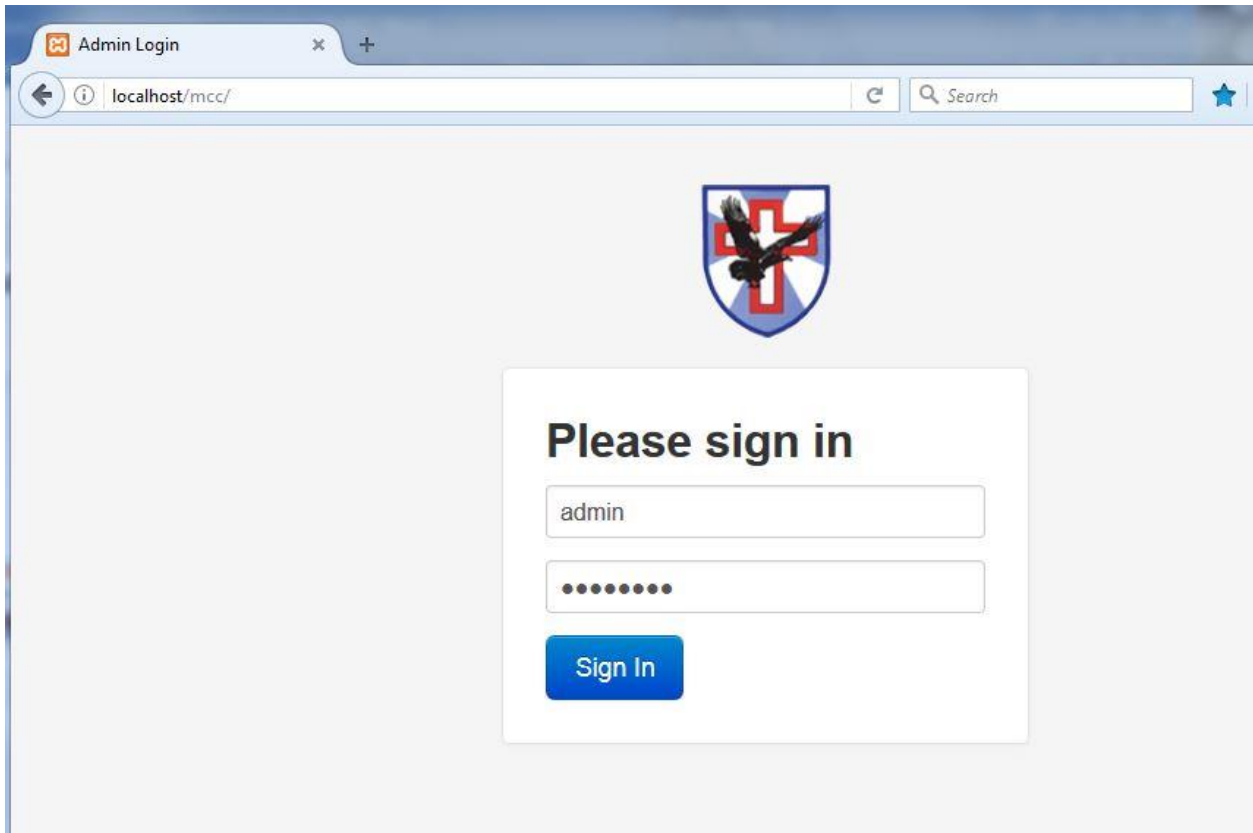
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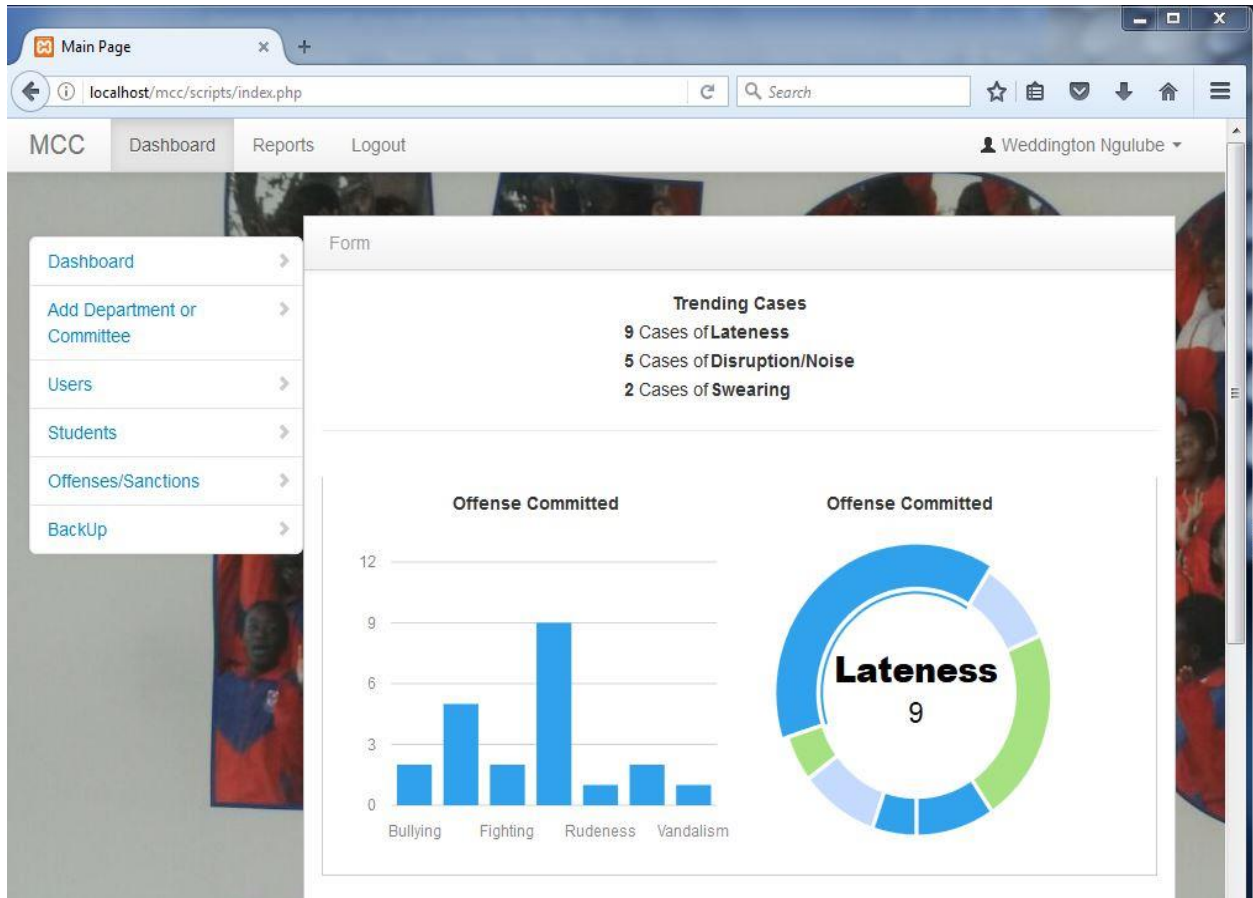
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APPENDIX A:
MCC STUDENT DISCIPLINARY SYSTEM
USER MANUAL

1. To run the system, ensure that Apache and MySQL are running in the XAMPP control panel. Open your browser software (Internet Explorer, Mozilla Firefox, Opera etc.) and type the following in the address bar; localhost/mcc. Press enter key to open System Log-In-page.



- To log in as Administrator, for the User-name, type **admin** and Password, type **password**. Click the **Sign In** button and the following screen will display;



The system dashboard window will display. This window will give system Users a quick overview of misdemeanour trends at College. This information is very handy for Teachers and College Management to quickly view trending cases currently happening at College and immediately enable them to investigate causes of such cases among pupils and come up with plans to mitigate the situation.

- To create a new system user, click on the **Users** sub-menu option as shown below. The User Registration form will display.

MCC Dashboard Reports Logout Weddington Ngulube

Dashboard Add Department or Committee Users Students Offenses/Sanctions BackUp

User Registration
Please Enter the user details below to create a new system user.

Note: All fields should be filled.

General Details

Name

Surname

E mail

Department or Committee

Login Details

User Name

Password Password Should Be atleast 8 characters.

Confirm

Access Level

Save Cancel

List of system users

Name	Surname	User Role	Action
Chindori	Chininga	Steward	Action ▾
Musa	Chikonaz	Staff	Action ▾
Noel	Mashonganyika	Steward	Action ▾

4. Fill in all the required information as shown below and click the save button to save the record. Otherwise if one made a mistake, they can click the cancel button to clear all fields and retype correct information.

General Details

Name

Surname

E mail

Department
or
Committee

Login Details

User Name

Password

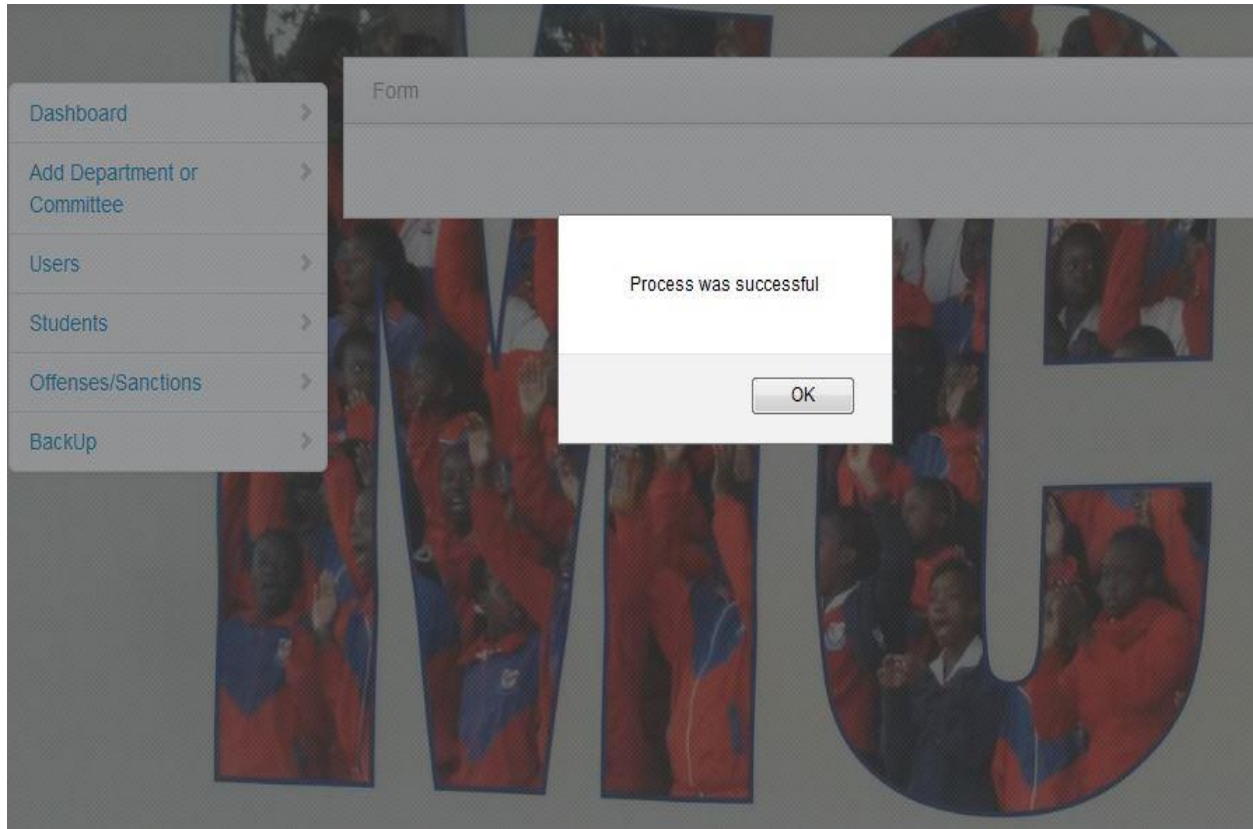
Confirm

Access
Level

- Stewards
- Staff
- Admin

We have three types of Users in the system as displayed above. **Stewards** are the Prefects at College. **Staff** are the teachers and **Admin** users are the Student Affairs Director and the Secretary who have administrator rights in the system. All the three types of users have different user-views in the system.

- After typing relevant information on all the fields and click save button, a confirmation window will display to show that the process was successful. Confirmation window is shown below;

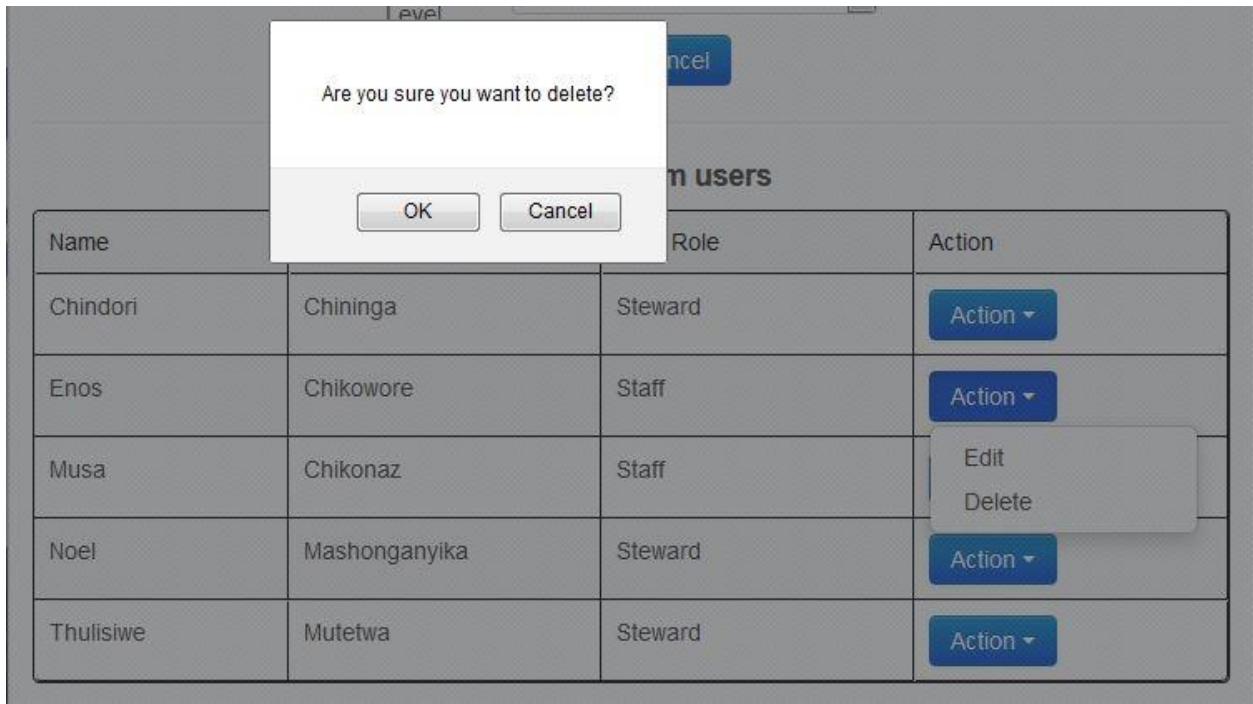


- The successfully created user object will be displayed under the list of system users as shown below;

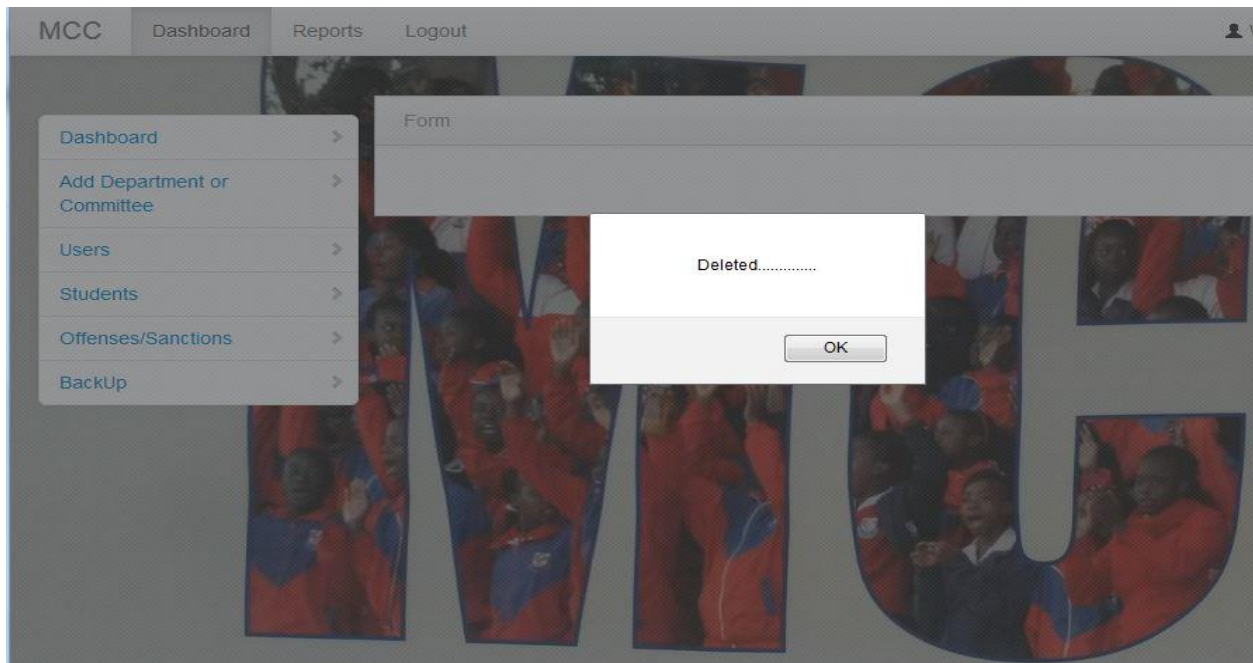
List of system users

Name	Surname	User Role	Action
Chindori	Chininga	Steward	Action ▾
Enos	Chikowore	Staff	Action ▾
Musa	Chikonaz	Staff	Action ▾
Noel	Mashonganyika	Steward	Action ▾
Thulisiwe	Mutetwa	Steward	Action ▾

7. To edit or delete a record from the system, click **Action** button as displayed on figure below, then click the required option.



For example, if one wants to delete a user from the system, maybe they are no-longer working at the institution, they click on the **Delete** option. A confirmation window for the operation will display for user to confirm the action. Click the **OK** button to confirm deletion of User's record from the system. A message will display to confirm the deletion operation as shown below.



- To create a new Student record in the system, click on the **Students** sub-menu icon as shown below and a blank Student Registration form will display.

MCC Dashboard Reports Logout Weddington Ngulube

Dashboard >
Add Department or Committee >
Users >
Students >
Offenses/Sanctions >
BackUp >

Form

Student Registration

Name

Surname

E mail

Sex

FormClass

Save Cancel

- Enter data in the required fields and click the save button.

MCC Dashboard Reports Logout Weddington Ngulube

Dashboard >
Add Department or Committee >
Users >
Students >
Offenses/Sanctions >
BackUp >

Form

Student Registration

Name

Surname

E mail

Sex

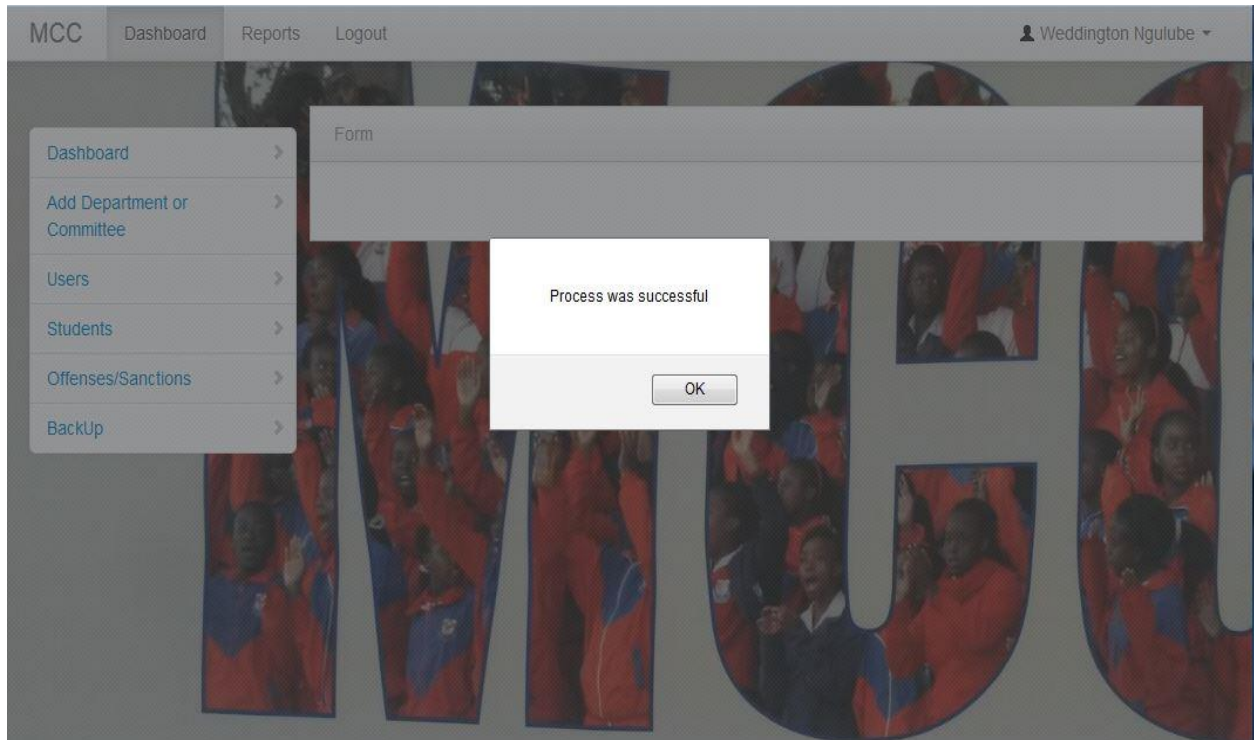
FormClass

Save Cancel

List of students

Name	Surname	Email	FormClass	Action
Aneebeba	Ashraf	aneebeba@mcc.ac.zw	F1K	Action ▾
Anotidaishe	Gaka	gaka@mcc.ac.zw	F1J	Action ▾
Chimbwe	Chitedza	chibwe@mcc.ac.zw	F2E	Action ▾

10. A confirmation message will display on the screen that the process was successful, as shown below.



Click OK button to display another blank form for entering more student records. Also a list of registered students will display at the bottom of the form, as illustrated by figure below.

List of students

Name	Surname	Email	FormClass	Action
Aneeba	Ashraf	aneeba@mcc.ac.zw	F1K	Action ▾
Anotidaishe	Chinanayi	chinanayi@mcc.ac.zw	F2I	Action ▾
Anotidaishe	Gaka	gaka@mcc.ac.zw	F1J	Action ▾
Chimbwe	Chitedza	chibwe@mcc.ac.zw	F2E	Action ▾
Christabel	Chigogo	chigogo@mcc.ac.zw	F1K	Action ▾
Denzel	Washington	denz@mcc.ac.zw	L6C	Action ▾
Husain	Batley	husain@mcc.ac.zw	F2E	Action ▾
Jimmy	Gazimbi	jimmy@mcc.ac.zw	F1M	Action ▾
Kevin	Chifamba	kevin@mcc.ac.zw	F2E	Action ▾
Kudzai	Chikwari	chikwari@mcc.ac.zw	F1K	Action ▾

11. To edit or delete any student record, click on the **Action** button as shown below.

The screenshot shows a web interface with a navigation bar (Dashboard, Reports, Logout) and a user profile (Weddington Ngulube). The main content is a table titled "List of students" with columns: Name, Surname, Email, FormClass, and Action. A modal dialog box is open over the "Action" button for the student "Anotidaishe Chigogo", asking "Are you sure you want to edit?". The dialog has "OK" and "Cancel" buttons. The table data is as follows:

Name	Surname	Email	FormClass	Action
Aneebeba	Ashraf	aneebeba@mcc.ac.zw	F1K	Action ▾
Anotidaishe	Chigogo	anotidaishe@mcc.ac.zw	F2I	Action ▾
Anotidaishe	Gaka	anotidaishe@mcc.ac.zw	F1J	Action ▾
Chimbwe	Chigogo	chimbwe@mcc.ac.zw	F2E	Edit Delete
Christabel	Chigogo	chigogo@mcc.ac.zw	F1K	Action ▾
Denzel	Washington	denz@mcc.ac.zw	L6C	Action ▾
Husain	Bathey	husain@mcc.ac.zw	F2E	Action ▾
Jimmy	Gazimbi	jimmy@mcc.ac.zw	F1M	Action ▾
Kevin	Chifamba	kevin@mcc.ac.zw	F2E	Action ▾
Kudzai	Chikwari	chikwari@mcc.ac.zw	F1K	Action ▾
Kudzayi	Chitate	kudzayi@mcc.ac.zw	F2E	Action ▾

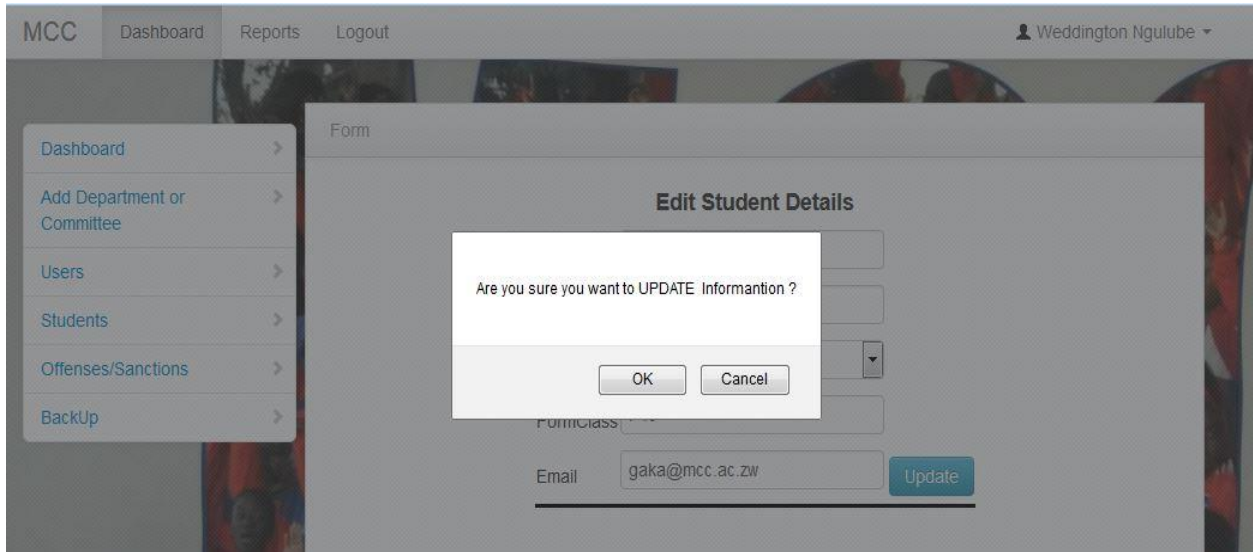
Click **OK** button to confirm your action and the following window will display.

The screenshot shows the "Edit Student Details" form. The navigation bar includes "MCC", "Dashboard", "Reports", "Logout", and the user profile "Weddington Ngulube". A sidebar menu on the left lists: Dashboard, Add Department or Committee, Users, Students, Offenses/Sanctions, and BackUp. The form fields are:

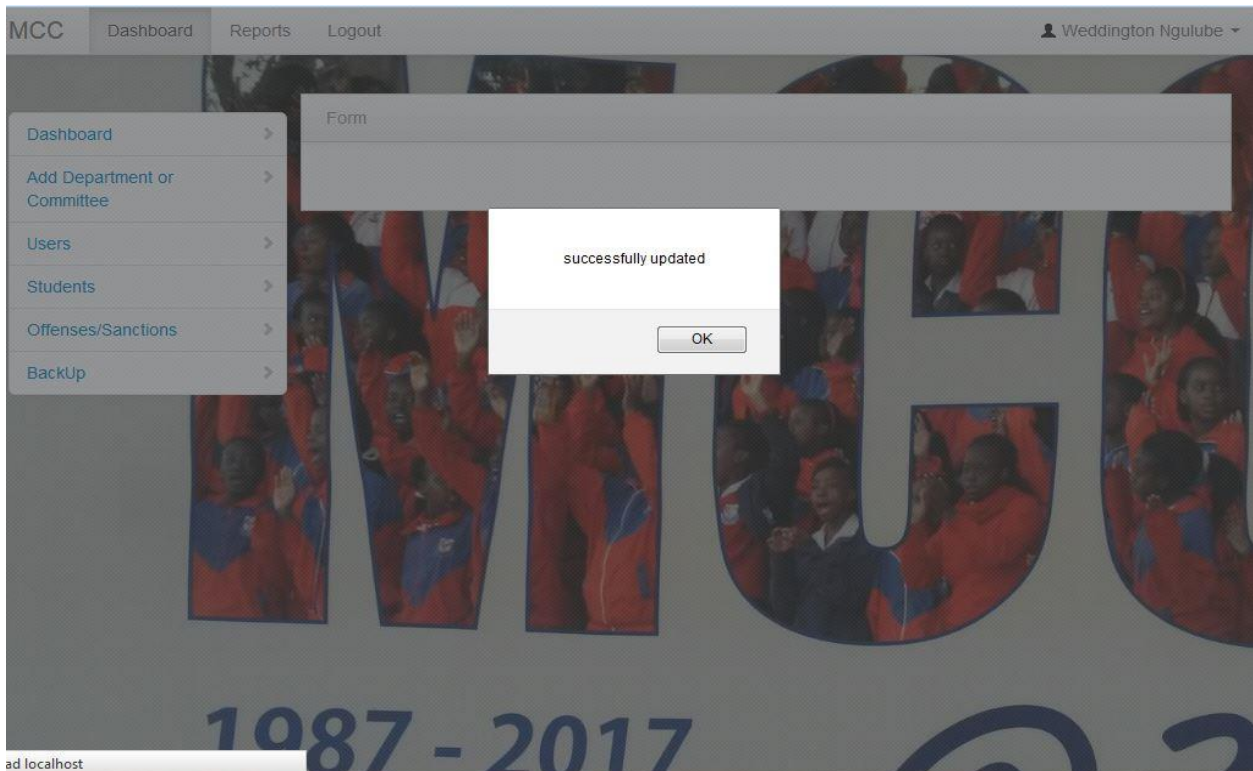
- Name: Anotidaishe
- Surname: Gaka
- Sex: male (dropdown menu)
- FormClass: F1J
- Email: gaka@mcc.ac.zw

An "Update" button is located at the bottom right of the form.

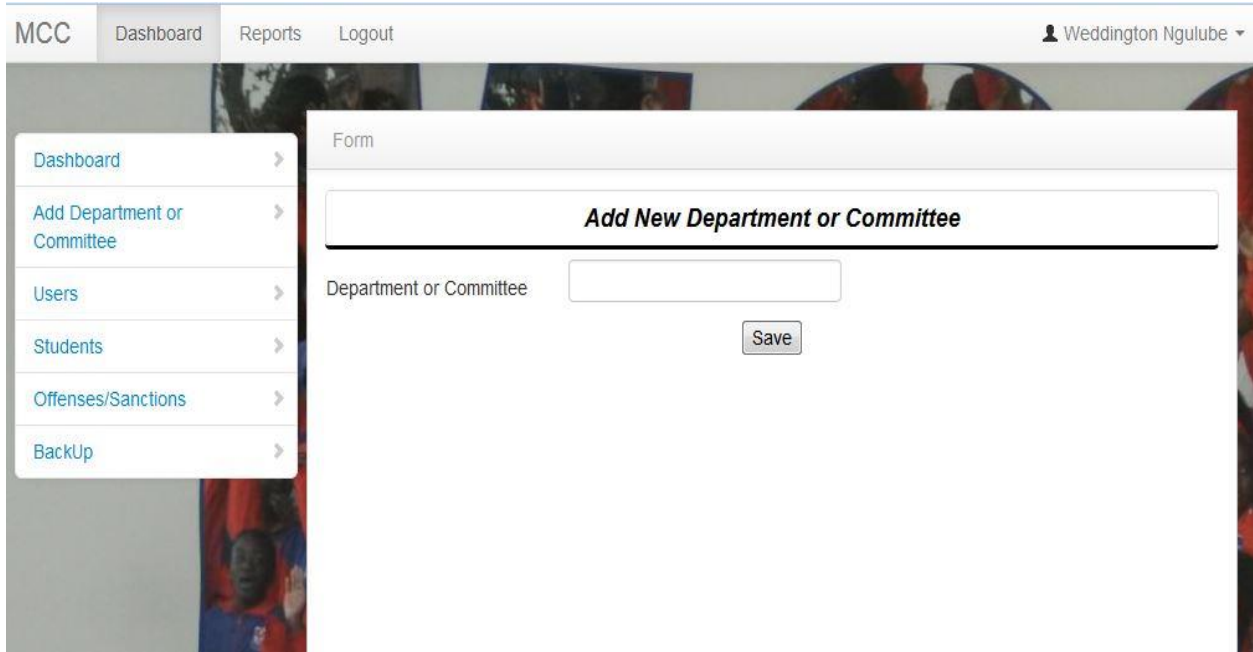
12. After changing any values on the student record, click the update button and the following confirmation message will show.



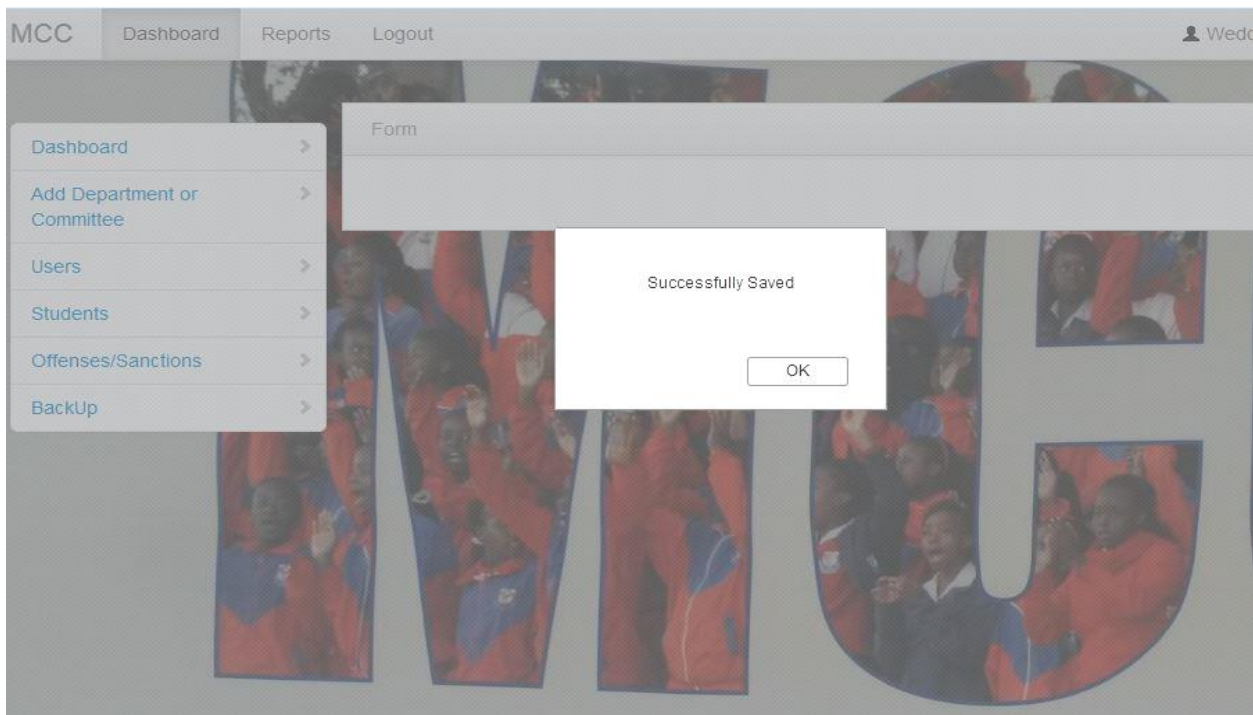
13. Click **OK** button to confirm the action, or click **Cancel** button to abort the record changes. A confirmation message will display if **OK** button is clicked, as shown by figure below.



14. The following blank form will enable addition of a Department or Stewards' Committee name into the system. Click the **Add Department or Committee** sub-menu option to display window as shown below.



After typing in the required name, click the **Save** button to confirm your action. A confirmation message will display as shown below. Then click **OK** button to return to system dashboard.



15. To update the Knowledge Base (KB), click on the **Offenses/Sanctions** sub-menu option on dashboard as shown below.

The screenshot shows the MCC dashboard with the 'Offenses/Sanctions' sub-menu selected. The form contains the following fields:

- Offense/Misdemeanors: eg Noise Making
- Sanctions: eg Hard Labour
- Duration Sanctions: [Empty] Hours

Buttons: Save, Cancel

List Of Offenses and Sanctions

Offense	Sanctions	Duration	Action
Theft	Manual Labour plus Counseling	2 Hours	Action ▾
Verbal Abuse	Manual Labour plus Counselling	2 Hours	Action ▾
Vandalism	Manual Labour plus payment of equipment!	1 Hours	Action ▾
Stealing	Manual Labour plus Counselling	3 Hours	Action ▾

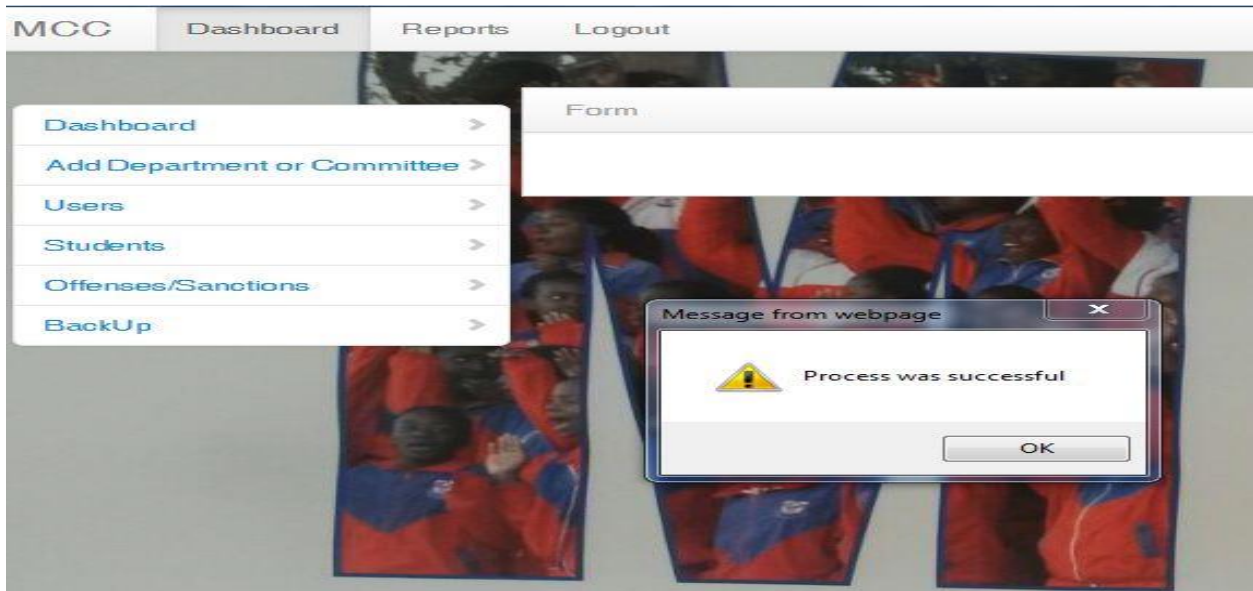
Enter misdemeanour or offense and its subsequent punishment. Also enter labour (punishment) hours that go with the committed offense. Click **Save** button to commit the changes or click **Cancel** to undo the changes.

The screenshot shows the MCC dashboard with the 'Offenses/Sanctions' sub-menu selected. The form contains the following fields:

- Offense/Misdemeanors: Absond Lessons
- Sanctions: Reflection Time
- Duration Sanctions: 2 Hours

Buttons: Save, Cancel

Once the record is saved, a confirmation message will also display to notify User of the successful changes.

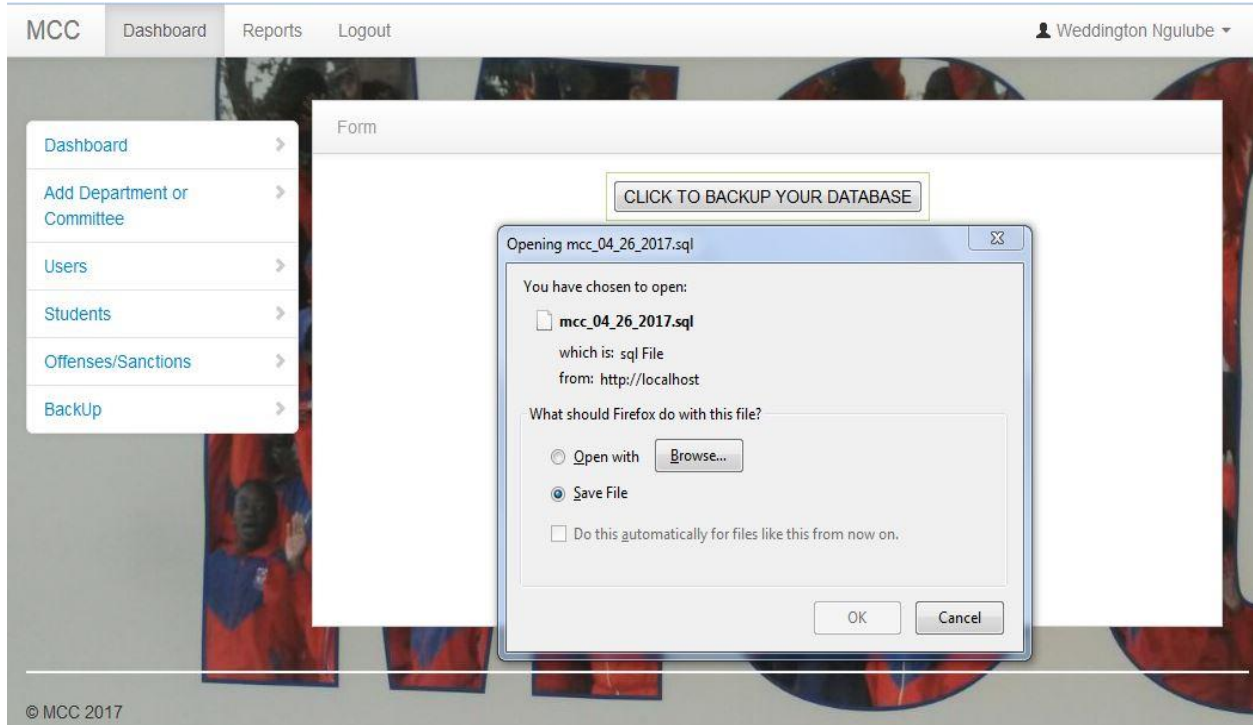


When you click **OK** button, the newly added record will appear on the Offenses and Sanctions list that displays below. Also if one wants to edit or delete an existing entry, they just click on the **Action** button and choose required option, the same way we edit/delete records from the system.

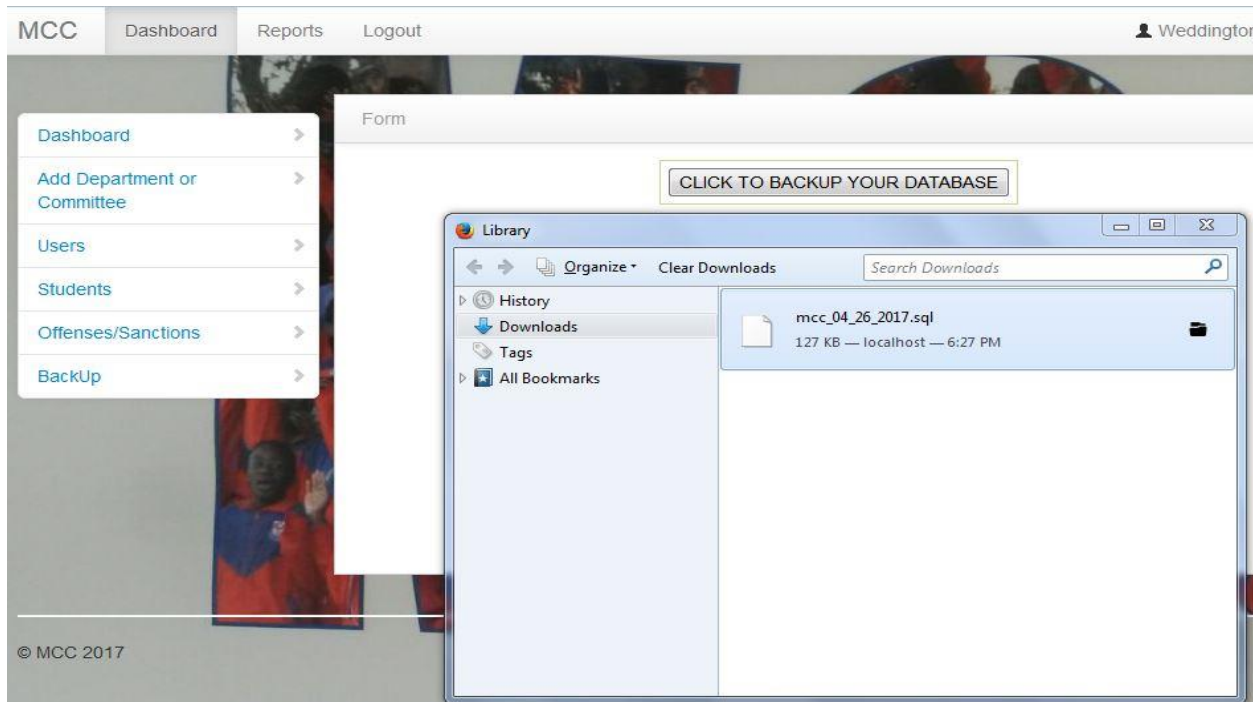
List Of Offenses and Sanctions

Offense	Sanctions	Duration	Action
Absond Lessons	Reflection Time	2 Hours	Action ▾
Theft	Manual Labour plus Counseling	2 Hours	<div style="border: 1px solid gray; padding: 2px;"> Edit Delete </div>
Verbal Abuse	Manual Labour plus Counseling	2 Hours	Action ▾
Vandalism	Manual Labour plus payment of equipment!	1 Hours	Action ▾
Smoking	Manual Labour plus Counseling	3 Hours	Action ▾
Swearing	Manual Labour plus Counseling	2 Hours	Action ▾
Rudeness	Manual Labour plus Counseling	3 Hours	Action ▾
Pairing-off	Manual Labour plus Counseling	1 Hours	Action ▾
Lateness	Manual Labour	1 Hours	Action ▾
Incorrect Dress	Manual Labour plus inspection	1 Hours	Action ▾

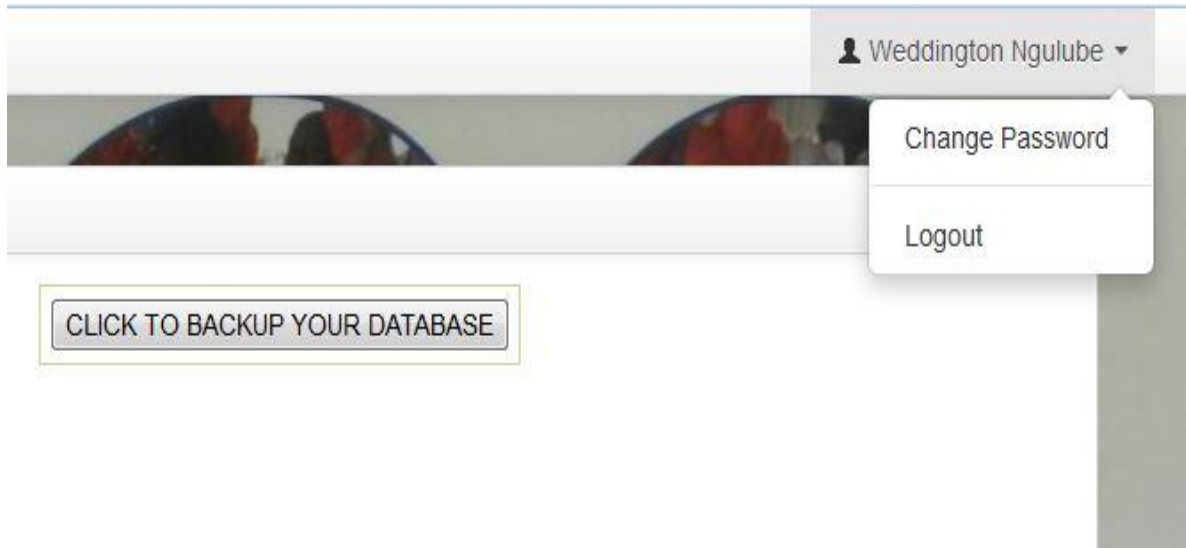
16. The administrator can also back up the database for future use. To do so, click on the **BackUp** sub-menu option. Once the backup button is clicked, a dialogue box will display, prompting the user to save the file or cancel the process.



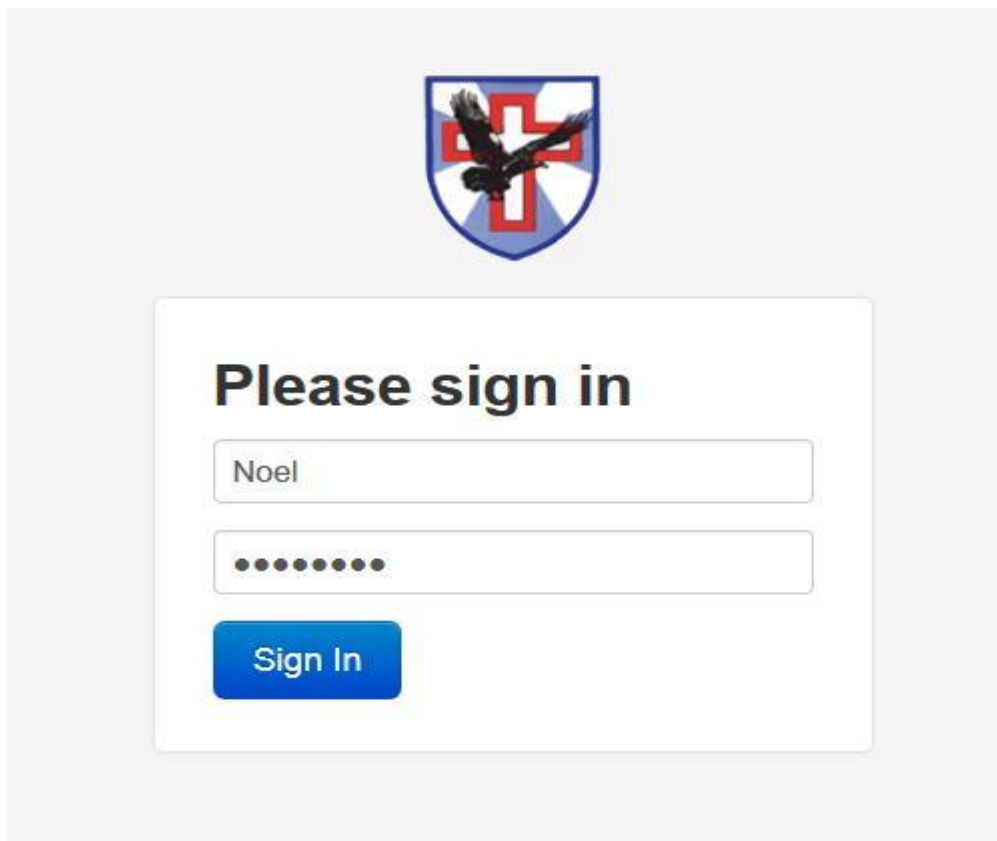
Choose the **Save File** option and click **OK** button to save DB file. DB file will be downloaded as shown below.



17. When a User is done working on the system, they can click on their username to logout from the system as illustrated below.



18. We will use a Steward's profile to logon to the system and work on it. All system users are created by the administrator, whether a Staff member or a Steward. However, system users have different user-views.



19. When the Steward types in their username and password, they click the **Sign In** button and the following interface will display.



The default view for all Users is the system dashboard. However, for a Steward, they only have access to **Knowledge Base** window and the **Punish** student window. We will explore each of the sub-menu options.

20. Just like the administrator, the **Knowledge Base** window enables users to update KB for the expert system.

The screenshot shows the MCC Knowledge Base update form for user Noel Mashonganyika. The form includes fields for 'Offense/Misdemeanors' (eg Noise Making), 'Sanctions' (eg Hard Labour), and 'Duration Sanctions' (Hours). Below the form is a table titled 'List Of Offenses and Sanctions'.

Offense	Sanctions	Duration	Action
Absond Lessons	Reflection Time	2 Hours	Action ▾
Theft	Manual Labour plus Counseling	2 Hours	Action ▾
Verbal Abuse	Manual Labour plus Counseling	2 Hours	Action ▾

21. The punishment window enables Stewards or Staff to punish students for the various offenses committed.

MCC Dashboard Reports Logout Noel Mashonganyika

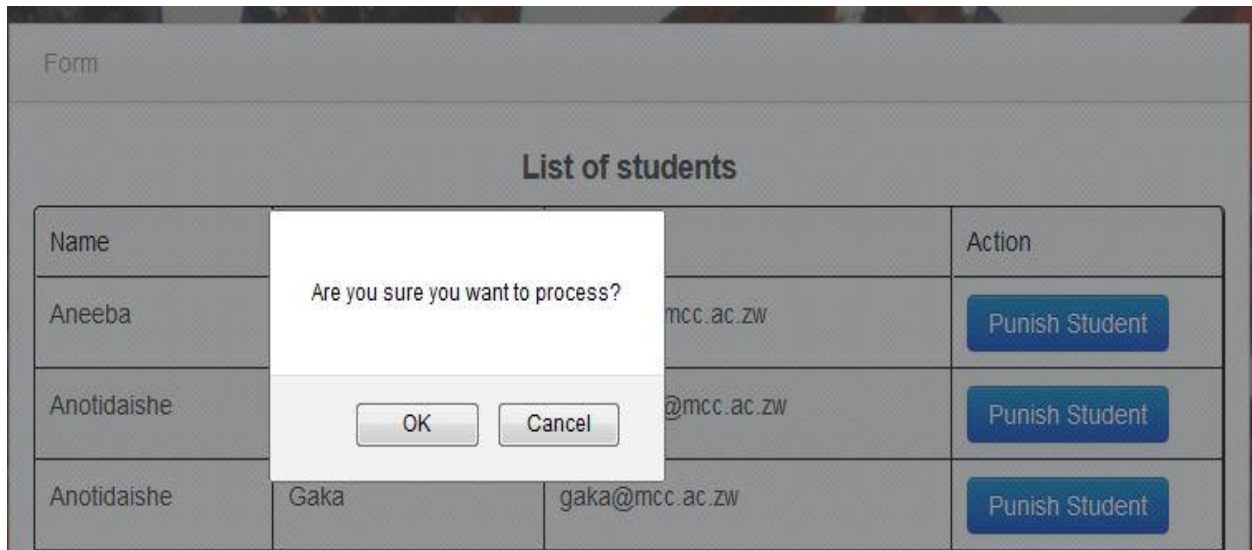
Dashboard >
KnowledgeBase >
Punish >

Form

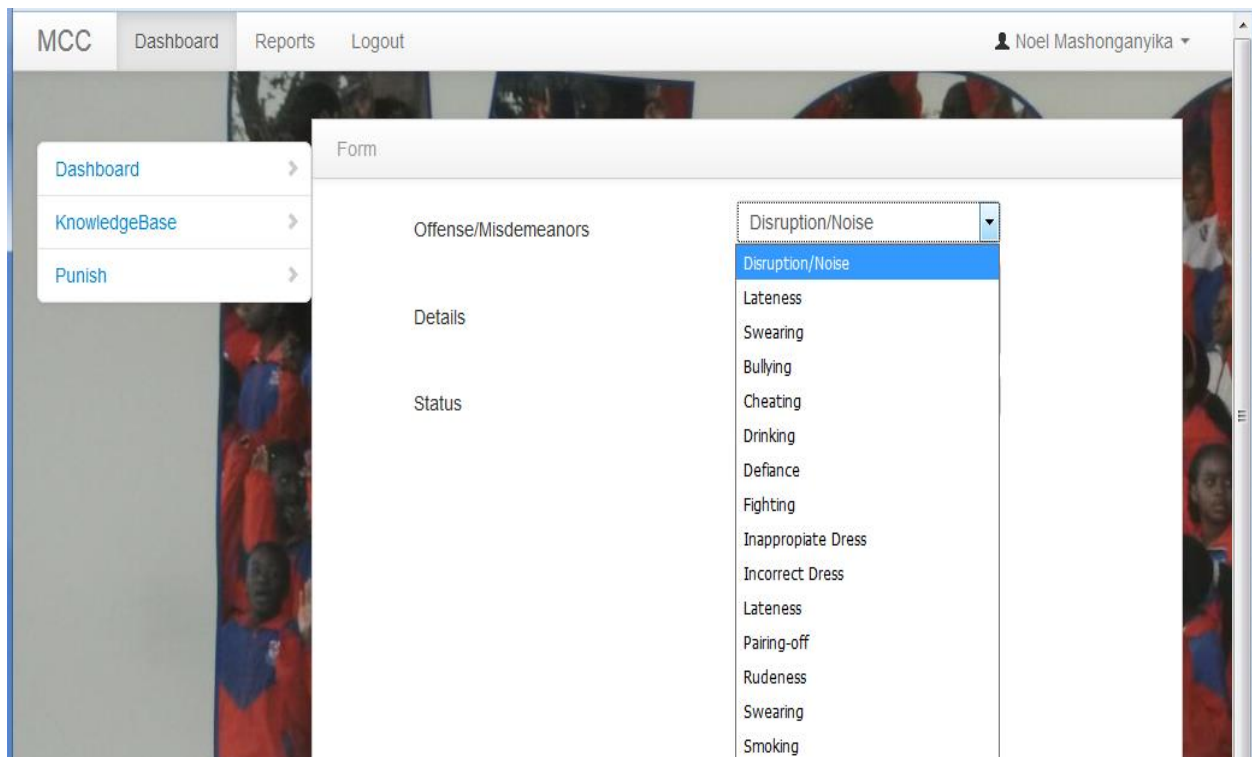
List of students

Name	Surname	Email	Action
Aneeba	Ashraf	aneeba@mcc.ac.zw	Punish Student
Anotidaishe	Chinanayi	chinanayi@mcc.ac.zw	Punish Student
Anotidaishe	Gaka	gaka@mcc.ac.zw	Punish Student
Chimbwe	Chitedza	chimbwe@mcc.ac.zw	Punish Student
Christabel	Chigogo	chigogo@mcc.ac.zw	Punish Student
Denzel	Washington	denz@mcc.ac.zw	Punish Student
Husain	Batley	husain@mcc.ac.zw	Punish Student
Jimmy	Gazimbi	jimmy@mcc.ac.zw	Punish Student

22. To allocate punishments, select the offender's record and click on the **Punish Student** button and the following window will display. Click **OK** button to proceed.



All that the User will do is select a particular offense or misdemeanor from the drop-down list which that particular student would have committed and the system will automatically allocate one sanction that corresponds to the committed offense.



23. After punishment allocations, the Stewards can then filter reports for individual students concerned and send these to them, either by printing hard-copies or downloading and emailing soft copies to them. One punishment report example is given below for Matshidiso Chivasa.

The screenshot shows a web interface with search filters for 'Punished' records. A modal dialog box titled 'Opening Punished.doc' is displayed, asking the user what they want to do with the file. The options are 'Open with Microsoft Word (default)', 'Save File', and 'Do this automatically for files like this from now on.' The 'Save File' option is selected. In the background, a table lists the search results:

name	surname	email	offense	sanction	duration	punishmentdate	status
Matshidiso	Chivasa	matshidiso@mcc.ac.zw	Absond Lessons	Reflection Time	2	04/26/2017	Pending

The image below shows a downloaded copy of Chivasa’s punishment report in MS Word format.

The screenshot shows a Microsoft Word document titled 'Punished(1) - Word'. The document contains a table with the same data as the web application, followed by the text 'Grand Summary (1 detail records)'.

name	surname	email	offense	sanction	duration	punishmentdate	status
Matshidiso	Chivasa	matshidiso@mcc.ac.zw	Absond Lessons	Reflection Time	2	04/26/2017	Pending

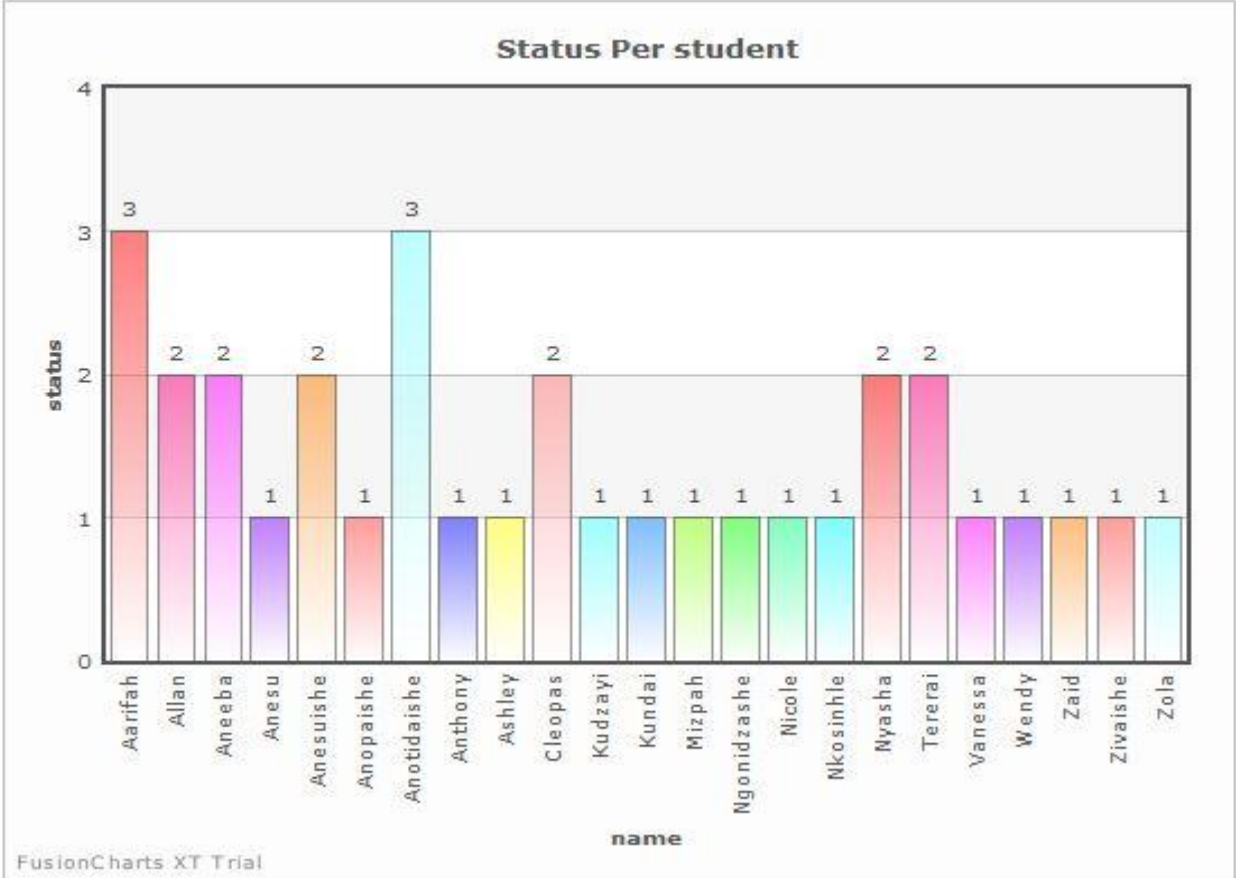
Grand Summary (1 detail records)

APPENDIX B:
SYSTEM REPORTS

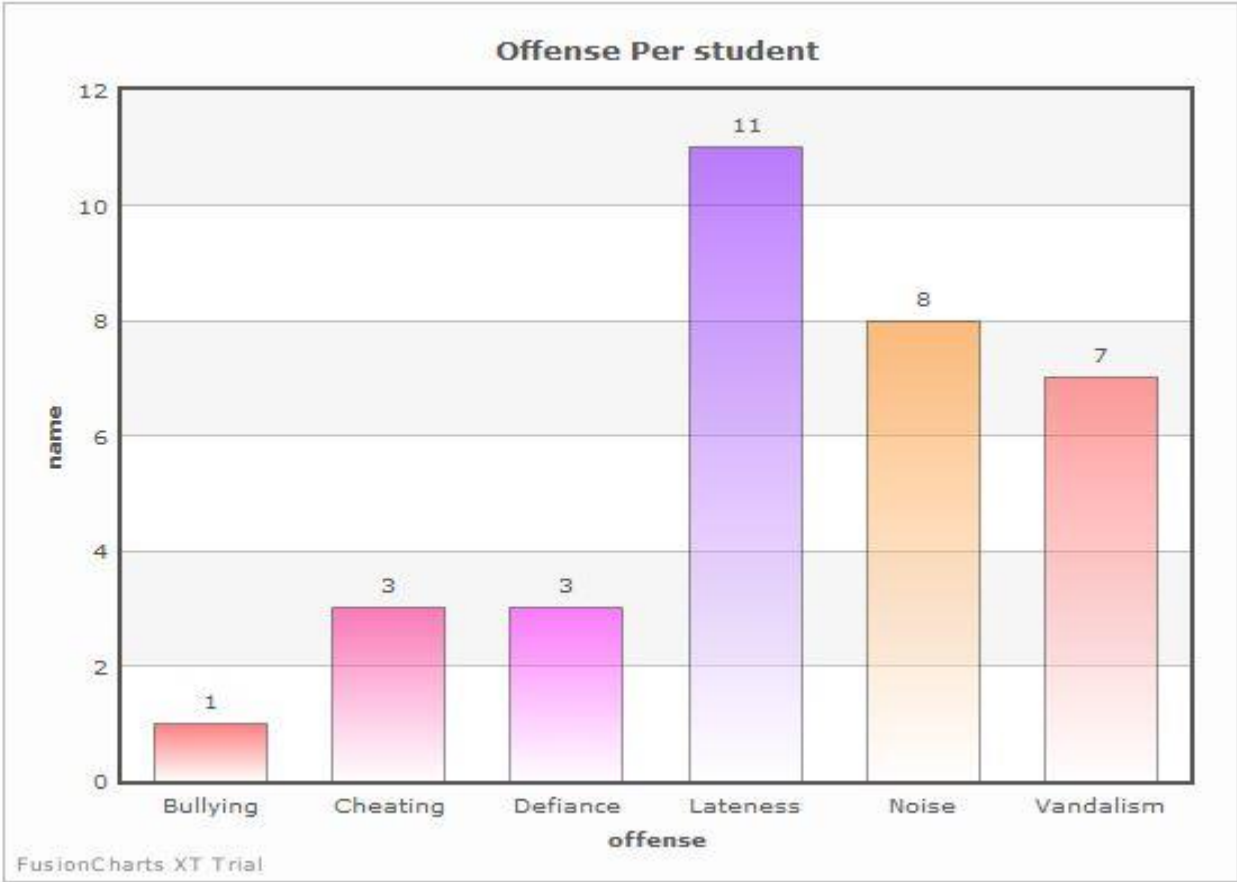
Students' Punishment Report

name	surname	email	offense	sanction	duration	punishmentdate	status	Form Class
Tererai	Chikwanda	tererai@mcc.ac.zw	Noise	Manual Labour	1	04/08/2017	Finished	F1J
Aarifah	Batthey	aarifah@mcc.ac.zw	Lateness	Manual Labour	1	05/03/2017	Finished	L6S
Aarifah	Batthey	aarifah@mcc.ac.zw	Bullying	Manual Labour plus Counselling	3	05/03/2017	Finished	L6S
Allan	Chandaengerwa	chandaengerwa@mcc.ac.zw	Lateness	Manual Labour	1	05/03/2017	Finished	U6C
Aneebea	Ashraf	aneebea@mcc.ac.zw	Cheating	Manual Labour	2	05/03/2017	Finished	F1K
Anesu	Chaitezvi	chaitezvi@mcc.ac.zw	Noise	Manual Labour	1	05/03/2017	Finished	U6S
Anesuishe	Gaka	anesuishe@mcc.ac.zw	Lateness	Manual Labour	1	05/03/2017	Finished	F3V
Zola	Bhebhe	zola@mcc.ac.zw	Lateness	Manual Labour	1	05/03/2017	Finished	F4L
Zivaishe	Chidhakwa	zivaishe@mcc.ac.zw	Noise	Manual Labour	1	05/03/2017	Finished	L6C
Zaid	Hassim	zaid@mcc.ac.zw	Cheating	Manual Labour	2	05/03/2017	Finished	F1J
Wendy	Mubata	wendy@mcc.ac.zw	Defiance	Manual Labour plus Counselling	3	05/03/2017	Finished	U6A
Ngonidzash	Charuma	ngonidzash@mcc.ac.zw	Lateness	Manual Labour	1	05/03/2017	Finished	F4L
Nicole	Banana	banana@mcc.ac.zw	Defiance	Manual Labour plus Counselling	3	05/03/2017	Finished	F3P
Nkosinhle	Gwizi	nkosinhle@mcc.ac.zw	Lateness	Manual Labour	1	05/03/2017	Finished	F1J
Nyasha	Chadhliwa	chadhliwa@mcc.ac.zw	Noise	Manual Labour	1	05/03/2017	Finished	F4G
Ashley	Masvove	masvove@mcc.ac.zw	Lateness	Manual Labour	1	05/03/2017	Finished	U6A
Vanessa	Machingura	vanessa@mcc.ac.zw	Cheating	Manual Labour	2	05/03/2017	Finished	U6A
Anotidaishe	Chinanayi	chinanayi@mcc.ac.zw	Lateness	Manual Labour	1	05/03/2017	Finished	F2I
Anotidaishe	Gaka	gaka@mcc.ac.zw	Defiance	Manual Labour plus Counselling	3	05/03/2017	Finished	F1J
Anopaishe	Chiremba	anopaishe@mcc.ac.zw	Vandalism	Manual Labour plus replace broken equipment!	2	05/03/2017	Finished	L6C

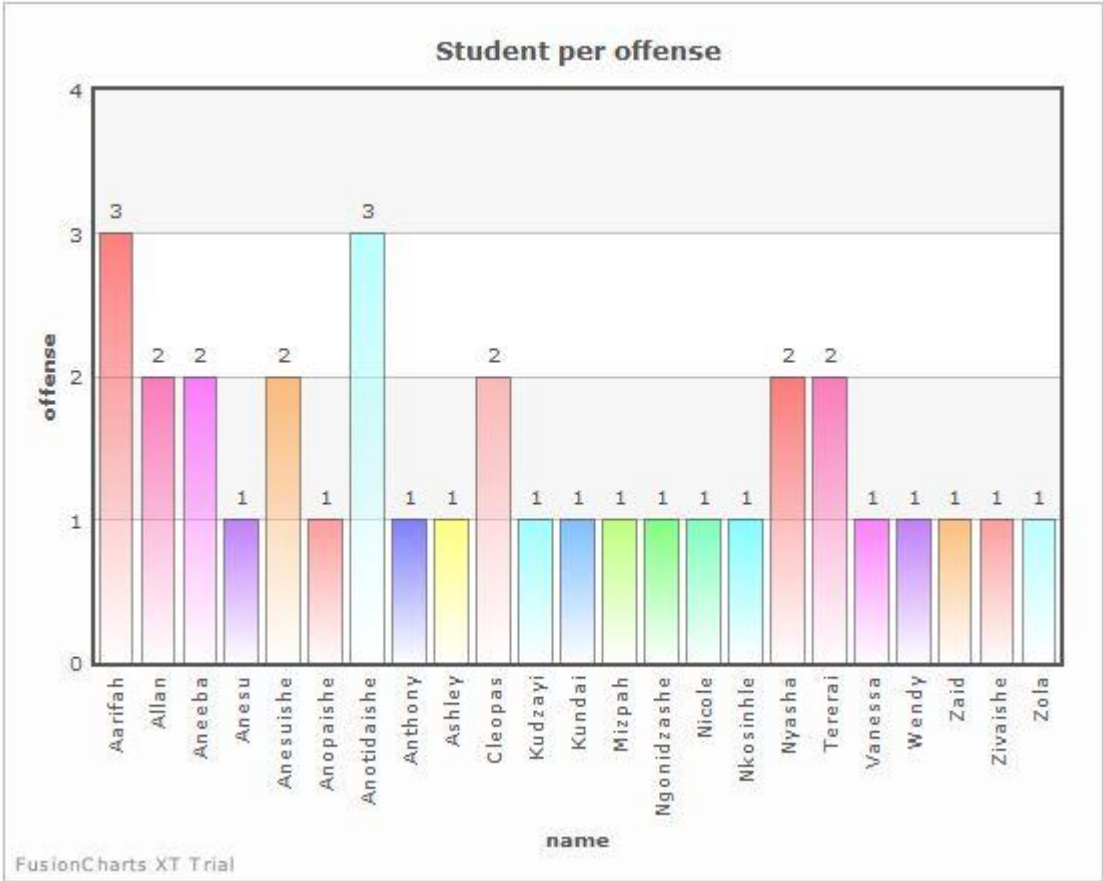
Punishment Statistics per Student Report



Statistics for Committed Offenses Report



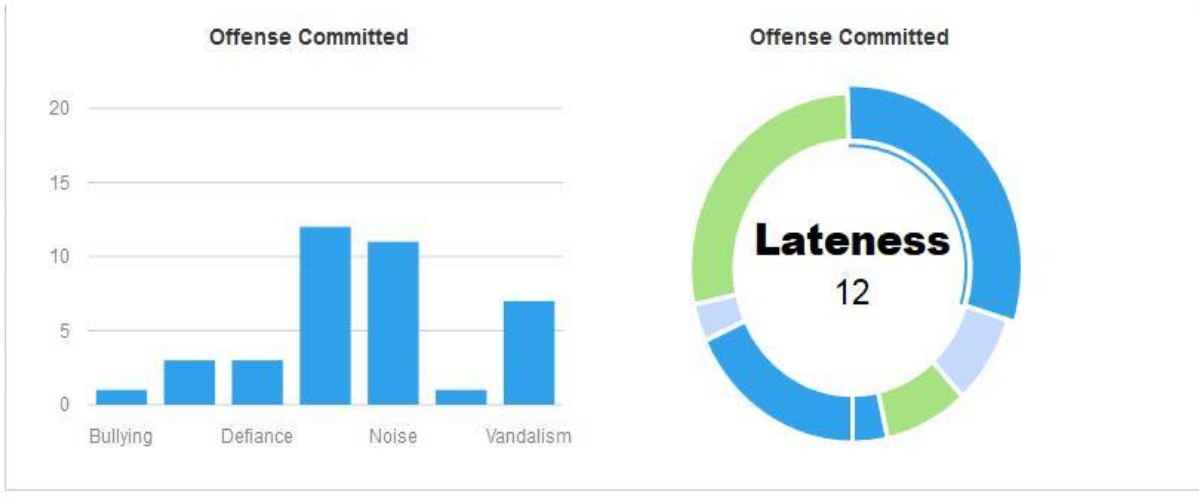
Committed Offenses by Student (Stats) Report



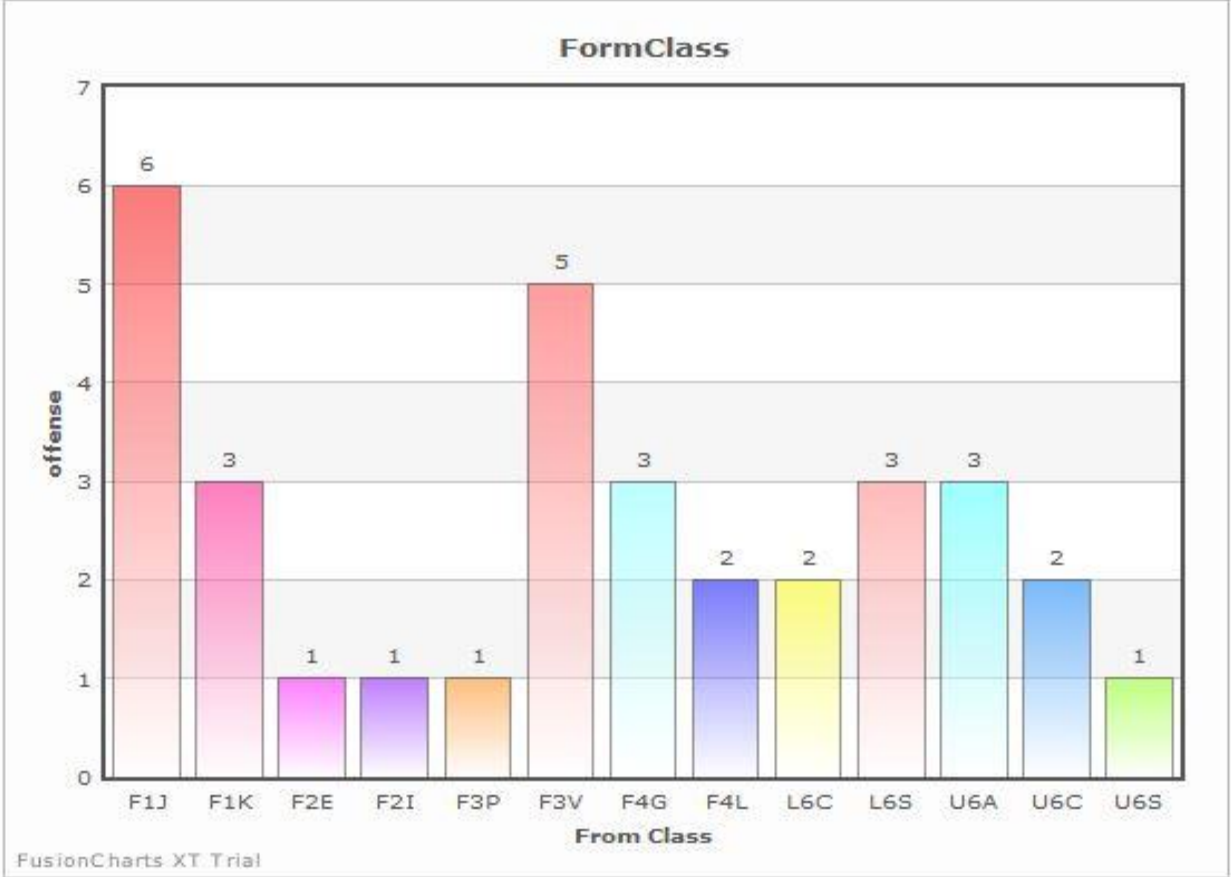
Trending Cases Statistical Report

Form

Trending Cases
12 Cases of **Lateness**
11 Cases of **Noise**
7 Cases of **Vandalism**



Offenses per Form Class Report



APPENDIX C:

INTERVIEW CHECKLIST

Interview Questions

1. Can you briefly explain how a student gets a punishment booking using the current processes?
2. What particular problems are there with the current disciplinary system at College?
3. What criteria do you use currently to allocate punishments to Students?
4. How do you ensure that every offender does not escape punishment?
5. How many manual labour hours are expected for every student to do for a particular offence?
6. How do you solve the issue of double booking of punishments for students on manual labour?
7. What criteria do you use to select nominees for the most improved behaviour for students at College at the Annual Speech and Prize giving Day?
8. How easy is it to compile student records for creating Testimonials for the Alumni?
9. What do you think about introducing a computer system to try and solve some of the issues being faced in the current manual system?
10. Do you think buying a standardised (off-the-shelf) version of software would be the best solution to this or having a customised (be-spoke) version of a students' disciplinary system would be a better idea?

APPENDIX D:
QUESTIONNAIRE

SECTION A

PLEASE CHOOSE **ONE OPTION** ON THE BOXES BELOW EACH QUESTION

1. What rating can you give to the current students' disciplinary system at MCC?

Excellent Good Fair Poor

2. Are you satisfied with the functionality it provides?

Yes No

3. Is there any chance that the current students' disciplinary system can be improved?

Yes No

4. Would computerisation of the students' disciplinary system be a good idea?

Yes No

5. Do you think developing an expert system for student affairs department is justified, considering costs involved in developing and implementing the system?

Yes No

QUESTIONNAIRE

SECTION B

- Answer all questions please.
- Be as truthful and honest as possible in your answering.
- Please return all questionnaires to the College Reception by the 30th of November 2016.

1. Please list any particular challenges being faced with the current students' disciplinary system at College?

.....
.....
.....
.....

2. What do you do when there is double booking of punishments for offenders at College?

.....
.....
.....

3. What improvements would you recommend to solve the issue of unfair punishments for some offenders who would have committed various misdemeanours at MCC?

.....
.....
.....

4. How would you want punishments to be allocated to offenders at College?

.....
.....
.....

5. Do you think all pupils are given fair punishments for the various offences committed at MCC, why or why not?

.....
.....
.....
.....

6. Are you happy with the way nominees of end-of-term awards for most improved behaviour for students are done, why or why not?

.....
.....
.....

7. Do you think Annual Student Awards for best behaviour are fairly done at College, why or why not?

.....
.....
.....

8. Would you consider computerisation of the students' disciplinary system, why or why not?

.....
.....
.....

APPENDIX E:

Observation Score Sheet.

Date:

Time:

OBSERVATION SCORE SHEET			
Question	Yes	No	N/A
1. Did everyone attend their scheduled punishment for the week?			
2. Are all the offenders allocated fair punishment?			
3. Was there any clash on the offenders' punishment schedule?			
4. If answer was yes above, was the matter resolved satisfactorily?			
5. Did any students abscond from punishment?			
6. Were there any anomalies noted on students nominated for the most improved behaviour awards?			

Comments:.....
.....
.....
.....

APPENDIX F:

SNIPPET OF CODE

```
<?php
include 'opendb.php';

        $rs=mysql_query("select * from users where id = '$_GET[id]'" ) or
die(mysql_error());
while($row = mysql_fetch_array($rs)){
        $id = $row['id'];
        $name = $row['name'];
        $surname = $row['surname'];
        $phone= $row['account'];
        $address = $row['address'];
        $idnum = $row['idnum'];
                $email = $row['email'];
        }

?>
<?php
if(isset($_POST['Submit'])){
include "opendb.php";
        $rs = mysql_query("UPDATE users set name =
'$_POST[name]',surname='$_POST[surname]',email='$_POST[email]',account='$_POST[phone
]' where id = '$_GET[id]'" )or die(mysql_error());
        //Write to log file
                WriteToLog("Edited User Details $_POST[name] $_POST[surname]
CLIENT TO STAND ID $_REQUEST[id]",$_SESSION['username']);
        if($rs){
?>
        <script language="javascript">
alert("successfully updated")
location = 'index.php'
        </script>
        <?php

        }
else
{
echo "problem ocured";
}
}

?>
```

```

<script type="text/javascript">
<!--
function MM_validateForm() { //v4.0
  if (document.getElementById){
    var i,p,q,nm,test,num,min,max,errors=",args=MM_validateForm.arguments;
    for (i=0; i<(args.length-2); i+=3) { test=args[i+2]; val=document.getElementById(args[i]);
      if (val) { nm=val.name; if ((val=val.value)!="") {
        if (test.indexOf('isEmail')!=-1) { p=val.indexOf('@');
          if (p<1 || p==(val.length-1)) errors+="- "+nm+" must contain an e-mail address.\n";
        } else if (test!='R') { num = parseFloat(val);
          if (isNaN(val)) errors+="- "+nm+" must contain a number.\n";
          if (test.indexOf('inRange') != -1) { p=test.indexOf(':');
            min=test.substring(8,p); max=test.substring(p+1);
            if (num<min || max<num) errors+="- "+nm+" must contain a number between '+min+' and
'+max+'.\n";
          } } } else if (test.charAt(0) == 'R') errors += '- '+nm+' is required.\n'; }
    } if (errors) alert("The following error(s) occurred:\n"+errors);
    document.MM_returnValue = (errors == "");
  } }
  </script>

```

```

<style type="text/css">
<!--
.style6 {font-size: 12px}
-->
</style>
<div class="style4">
  <div align="center"><h4>Edit User Details</h4></div>
</div>
<form action="" method="post" >

```

```

<center><table width="46%" border="0" bgcolor="#FFFFFF" align="center" style="border-
bottom:3px solid #000000;">

```

```

  <tr>
    <td>Name</td>
    <td>
      <input name="name" type="text" id="name" value="<?php echo $name; ?>" required />
    </td>
  </tr>
  <tr>
    <td width="77"> Surname</td>
    <td width="161">

```

```

        <input name="surname" type="text" id="surname" value="<?php echo $surname; ?>"
required />          </td>
    </tr> <tr>
        <td>Email</td>
        <td>
            <input name="email" type="text" id="email" value="<?php echo $email; ?>" required
/>          </td>
    </tr> <tr>
        <td>Cellnumber</td>
        <td>
            <input name="phone" type="text" id="phone" value="<?php echo $phone; ?>"
required />          </td>
    </tr> <tr>
        <td></td>
        <td>
            <input name="Submit" type="Submit" id="Submit" value="Update" class='btn btn-info'
onclick="return confirm('Are you sure you want to UPDATE Informantion ?')" />          </td>
    </tr>
</table>
</form>

```

```

<?php
include 'opendb.php';

```

```

        $rs=mysql_query("select * from users where id = '$_GET[id]'" ) or
die(mysql_error());
while($row = mysql_fetch_array($rs)){
    $id = $row['id'];
    $name = $row['name'];
    $surname = $row['surname'];
    $phone= $row['account'];
    $address = $row['address'];
    $idnum = $row['department'];
        $email = $row['email'];
    }

```

```

?>
<?php
if(isset($_POST['Submit'])){
    include "opendb.php";
    $rs = mysql_query("UPDATE users set name =
'$_POST[name]',surname='$_POST[surname]',email='$_POST[email]',department='$_POST[Fo
rmClass]' where id = '$_GET[id]'" )or die(mysql_error());
    //Write to log file

```

```

if($rs){
?>
<script language="javascript">
alert("successfully updated")
location = 'index.php'
</script>
<?php

}
else
{
echo "problem ocured";
}
}

?>

<script type="text/javascript">
<!--
function MM_validateForm() { //v4.0
if (document.getElementById){
var i,p,q,nm,test,num,min,max,errors="",args=MM_validateForm.arguments;
for (i=0; i<(args.length-2); i+=3) { test=args[i+2]; val=document.getElementById(args[i]);
if (val) { nm=val.name; if ((val=val.value)!="") {
if (test.indexOf('isEmail')!=-1) { p=val.indexOf('@');
if (p<1 || p==(val.length-1)) errors+='- '+nm+' must contain an e-mail address.\n';
} else if (test!='R') { num = parseFloat(val);
if (isNaN(val)) errors+='- '+nm+' must contain a number.\n';
if (test.indexOf('inRange') != -1) { p=test.indexOf(':');
min=test.substring(8,p); max=test.substring(p+1);
if (num<min || max<num) errors+='- '+nm+' must contain a number between '+min+' and
'+max+'.\n';
} } } else if (test.charAt(0) == 'R') errors += '- '+nm+' is required.\n'; }
} if (errors) alert("The following error(s) occurred:\n"+errors);
document.MM_returnValue = (errors == "");
} }
//-->
</script>

<style type="text/css">
<!--
.style6 {font-size: 12px}
-->
</style>
<div class="style4">
<div align="center"><h4>Edit Student Details</h4></div>

```



```

</div>
<form action="" method="post" >

<center><table width="46%" border="0" bgcolor="#FFFFFF" align="center" style="border-
bottom:3px solid #000000;">

    <tr>
    <td>Name</td>
    <td>
        <input name="name" type="text" id="name" value="<?php echo $name; ?>" required />
    </td>
    </tr>
    <tr>
        <td width="77"> Surname</td>
        <td width="161">
            <input name="surname" type="text" id="surname" value="<?php echo $surname; ?>"
required />
        </td>
    </tr><!-- <tr>
        <td>Sex</td>
        <td>
            <select name="sex"
required><option>male</option><option>female</option></select>
        </td>
    </tr -->
    <tr>
        <td>FormClass </td>
        <td>
            <input name="FormClass" type="text" id="FormClass" required="required"
value="<?php echo $idnum; ?>" />
        </td>
    </tr>
    <tr>
        <td>Email</td>
        <td>
            <input name="email" type="text" id="email" value="<?php echo $email; ?>" required
/>
        </td>
    </tr> <tr>
        <td>Cellnumber</td>
        <td>
            <input name="phone" type="text" id="phone" value="<?php echo $phone; ?>"
required />
        </td>
    </tr> <tr>
-->
        <td></td>
        <td>

```

```

        <input name="Submit" type="Submit" id="Submit" value="Update" class="btn btn-info'
onclick="return confirm('Are you sure you want to UPDATE Informantion ?)' />      </td>
    </tr>
</table>
</form>

```

```

<?php
include 'opendb.php';

```

```

        $rs=mysql_query("select * from sanction where sid = '$_GET[id]'" ) or
die(mysql_error());
while($row = mysql_fetch_array($rs)){
    $id = $row['id'];
    $name = $row['offense'];
    $surname = $row['sanction'];
    $phone= $row['duration'];
    $address = $row['address'];
    $idnum = $row['idnum'];
        $email = $row['email'];
    }

```

```
?>
```

```

<?php
if(isset($_POST['Submit'])){
    include "opendb.php";
    $rs = mysql_query("UPDATE sanction set offense =
'$_POST[offense]',sanction='$_POST[sanctions]',duration='$_POST[duration]' where sid =
'$_GET[id]'" )or die(mysql_error());
    //Write to log file
        // WriteToLog("Edited User Details $_POST[name] $_POST[surname]
TO ID $_REQUEST[id]",$_SESSION['username']);
    if($rs){
        ?>
        <script language="javascript">
alert("successfully updated")
location = 'index.php'
        </script>
        <?php
    }
else
    {
    echo "problem occured";
    }
}

```

?>

```
<script type="text/javascript">
<!--
function MM_validateForm() { //v4.0
  if (document.getElementById){
    var i,p,q,nm,test,num,min,max,errors="",args=MM_validateForm.arguments;
    for (i=0; i<(args.length-2); i+=3) { test=args[i+2]; val=document.getElementById(args[i]);
    if (val) { nm=val.name; if ((val=val.value)!="") {
      if (test.indexOf('isEmail')!=-1) { p=val.indexOf('@');
        if (p<1 || p==(val.length-1)) errors+='- '+nm+' must contain an e-mail address.\n';
      } else if (test!='R') { num = parseFloat(val);
        if (isNaN(val)) errors+='- '+nm+' must contain a number.\n';
        if (test.indexOf('inRange') != -1) { p=test.indexOf(':');
          min=test.substring(8,p); max=test.substring(p+1);
          if (num<min || max<num) errors+='- '+nm+' must contain a number between '+min+' and
'+max+'.\n';
        } } } else if (test.charAt(0) == 'R') errors += '- '+nm+' is required.\n'; }
    } if (errors) alert('The following error(s) occurred:\n'+errors);
    document.MM_return Value = (errors == "");
  } }
//-->
</script>
```

```
<style type="text/css">
<!--
.style6 {font-size: 12px}
-->
</style>
<div class="style4">
  <div align="center"><h4>Edit Offense and Sanction Details</h4></div>
</div>
<form action="" method="post" >
```

```
<center>
```

```
<table width="80%" border="0">
```

```
<tr>
  <td>Offense/Misdemeanors</td>
  <td>
    <input name="offense" type="text" id="offense" required="required" value="<?php echo
$name; ?>" width="100%" /> </td>
```

```

</tr>
<tr>
  <td width="267"> Sanctions</td>
  <td width="287">
    <textarea name="sanctions" required><?php echo $surname; ?></textarea>      </td>
</tr>
  <tr>
    <td width="267">Duraton Sanctions</td>
    <td width="287"><input type="text" name="duration" min="1" max="99" value="<?php
echo $phone; ?>" maxlength="2"> Hours</td>
</tr>
  <tr>
    <td></td>
    <td>
      <input name="Submit" type="Submit" id="Submit" value="Save" class="btn btn-
primary" data-original-title="Click to process Information" /> <a
href="" > <button class="btn btn-primary"> Cancel</button></a>      </td>
</tr>
</table>
</form>

```

```

<?php
error_reporting(0);
include ('../aut.php');
  include ('../opendb.php');
  include ('../functions.php');//include ('pm.php');

```

```

?><!DOCTYPE html>
<html>

```

```

<head>
  <title>Main Page</title>

  <link href="bootstrap/css/bootstrap.min.css" rel="stylesheet" media="screen">
  <link href="bootstrap/css/bootstrap-responsive.min.css" rel="stylesheet" media="screen">
  <link href="assets/styles.css" rel="stylesheet" media="screen">
    <link href="assets/DT_bootstrap.css" rel="stylesheet" media="screen">
  <link href="vendors/jGrowl/jquery.jgrowl.css" rel="stylesheet" media="screen">

  <!--[if lte IE 8]><script language="javascript" type="text/javascript"
src="vendors/flot/excanvas.min.js"></script><![endif]-->
  <!-- HTML5 shim, for IE6-8 support of HTML5 elements -->
  <!--[if lt IE 9]>
    <script src="http://html5shim.googlecode.com/svn/trunk/html5.js"></script>
  <![endif]-->

```

```

<script src="vendors/modernizr-2.6.2-respond-1.1.0.min.js"></script>
</head>

<body background="images/bg.jpeg">
  <div class="navbar navbar-fixed-top" style="background-color: aqua">
    <div class="navbar-inner" style="background-color: aqua">
      <div class="container-fluid">
        <a class="btn btn-navbar" data-toggle="collapse" data-target=".nav-collapse">
          <span class="icon-bar"></span>
          <span class="icon-bar"></span>
          <span class="icon-bar"></span>
        </a>
        <a class="brand" href="#">MCC</a>
        <div class="nav-collapse collapse">
          <ul class="nav pull-right">
            <li class="dropdown">
              <a href="#" role="button" class="dropdown-toggle" data-
toggle="dropdown"><i class="icon-user"></i> <?php echo $_SESSION['name'];?> <i
class="caret"></i>

              </a>
              <ul class="dropdown-menu">
                <li>
                  <a tabindex="-1" href="index.php?page=changepass.php">Change
Password</a>
                </li>
                <li class="divider"></li>
                <li>
                  <a tabindex="-1" href=" ../logout.php">Logout</a>
                </li>
              </ul>
            </li>
          </ul>
          <ul class="nav">
            <li class="active">
              <a href="#">Dashboard</a>
            </li> <li >
              <a href="reports">Reports</a>
            </li><li >
              <a href=" ../logout.php">Logout</a>
            </li>
          </ul>
        </div>
      </div>
    </div>
  </div>
  <!--
  <li class="dropdown">
    <a href="#" data-toggle="dropdown" class="dropdown-toggle">Settings <b
class="caret"></b>

```

```

</a>
<ul class="dropdown-menu" id="menu1">
  <li>
    <a href="#">Tools <i class="icon-arrow-right"></i>
    </a>
    <ul class="dropdown-menu sub-menu">
      <li>
        <a href="#">Reports</a>
      </li>
      <li>
        <a href="#">Logs</a>
      </li>
      <li>
        <a href="#">Errors</a>
      </li>
    </ul>
  </li>
  <li>
    <a href="#">SEO Settings</a>
  </li>
  <li>
    <a href="#">Other Link</a>
  </li>
  <li class="divider"></li>
  <li>
    <a href="#">Other Link</a>
  </li>
  <li>
    <a href="#">Other Link</a>
  </li>
</ul>
</li>
<li class="dropdown">
  <a href="#" role="button" class="dropdown-toggle" data-
toggle="dropdown">Content <i class="caret"></i>
</a>
<ul class="dropdown-menu">
  <li>
    <a tabindex="-1" href="#">Blog</a>
  </li>
  <li>
    <a tabindex="-1" href="#">News</a>
  </li>
  <li>

```

```

        <a tabindex="-1" href="#">Custom Pages</a>
    </li>
    <li>
        <a tabindex="-1" href="#">Calendar</a>
    </li>
    <li class="divider"></li>
    <li>
        <a tabindex="-1" href="#">FAQ</a>
    </li>
</ul>
</li>
<li class="dropdown">
    <a href="#" role="button" class="dropdown-toggle" data-
toggle="dropdown">Users <i class="caret"></i>
    </a>
    <ul class="dropdown-menu">
        <li>
            <a tabindex="-1" href="#">User List</a>
        </li>
        <li>
            <a tabindex="-1" href="#">Search</a>
        </li>
        <li>
            <a tabindex="-1" href="#">Permissions</a>
        </li>
    </ul>
</li>
-->
    </ul>
</div>
<!--/.nav-collapse -->
</div>
</div>
</div>
<div class="container-fluid">
    <div class="row-fluid">
        <div class="span3" id="sidebar">
            <ul class="nav nav-list bs-docs-sidenav nav-collapse collapse">
                <li>
                    <a href="index.php"><i class="icon-chevron-right"></i> Dashboard</a>
                </li>
                <li>
                    <?php if($_SESSION['access']==2){?>
                </li>
                <li>
                    <a href="index.php?page=sanction.php"><i class="icon-chevron-right"></i>
KnowledgeBase</a>
            </ul>
        </div>
    </div>
</div>

```

```

        </li> <li>
            <a href="index.php?page=punish.php"><i class="icon-chevron-right"></i>
Punish</a>
        </li>
            <?php } if($_SESSION['access']==3){?>
        <!--<li>
            <a href="index.php?page=sanction.php"><i class="icon-chevron-right"></i>
KnowledgeBase</a>
        </li> --> <li>
            <a href="index.php?page=punish.php"><i class="icon-chevron-right"></i>
Punish</a>
        </li>
            <?php }

                if($_SESSION['access']==1){
                ?>
        <li>
            <a href="index.php?page=dept.php"><i class="icon-chevron-right"></i> Add
Department or Committee</a>
        </li> <li>
            <a href="index.php?page=registration.php"><i class="icon-chevron-
right"></i> Users</a>
        </li> <li>
            <a href="index.php?page=students.php"><i class="icon-chevron-right"></i>
Students</a>
        </li>
        <li>
            <a href="index.php?page=sanction.php"><i class="icon-
chevron-right"></i> Offenses/Sanctions</a>

        </li><li>
            <a href="index.php?page=backup.php"><i class="icon-
chevron-right"></i> BackUp</a>

        </li>
<!--
        <li class="active">
            <a href="form.html"><i class="icon-chevron-right"></i> Forms</a>
        </li>
        <li>
            <a href="tables.html"><i class="icon-chevron-right"></i> Tables</a>
        </li>
        <li>
            <a href="buttons.html"><i class="icon-chevron-right"></i> Buttons &
Icons</a>
        </li>
        <li>

```



```

        <a href="editors.html"><i class="icon-chevron-right"></i> WYSIWYG
Editors</a>
    </li>
    <li>
        <a href="interface.html"><i class="icon-chevron-right"></i> UI &
Interface</a>
    </li>
    <li>
        <a href="#"><span class="badge badge-success pull-right">731</span>
Orders</a>
    </li>
    <li>
        <a href="#"><span class="badge badge-success pull-right">812</span>
Invoices</a>
    </li>
    <li>
        <a href="#"><span class="badge badge-info pull-right">27</span>
Clients</a>
    </li>
    <li>
        <a href="#"><span class="badge badge-info pull-right">1,234</span>
Users</a>
    </li>
    <li>
        <a href="#"><span class="badge badge-info pull-right">2,221</span>
Messages</a>
    </li>
    <li>
        <a href="#"><span class="badge badge-info pull-right">11</span>
Reports</a>
    </li>
    <li>
        <a href="#"><span class="badge badge-important pull-right">83</span>
Errors</a>
    </li>
    <li>
        <a href="#"><span class="badge badge-warning pull-right">4,231</span>
Logs</a>
    </li>
-->
    <?php } ?>
</ul>
</div>
<!--/span-->
<div class="span9" id="content">
    <!-- morris stacked chart -->

```

```
<div class="block">
  <div class="navbar navbar-inner block-header">
    <div class="muted pull-left"><?php echo $formtitle;?></div>
  </div>
  <div class="block-content collapse in">
    <div class="span12">
```

```
<?php
```

```
//echo $date;
```

```
$pg = @$_REQUEST['page'];
//echo $_SESSION['access'];
if($pg != "" && file_exists(dirname(__FILE__)."/".$pg)){
require(dirname(__FILE__)."/".$pg);
}elseif(!file_exists(dirname(__FILE__)."/".$pg))
include_once(dirname(__FILE__)."/404.php");
else{
include_once("morris.php");
}
```

```
?> <br>
```

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<br>
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</div>
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</div>
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</div>
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</div>
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<hr>
```

```

    <footer>
      <p>&copy; MCC 2017</p>
    </footer>
  </div>
<!--/.fluid-container-->

<script src="vendors/jGrowl/jquery.jgrowl.js"></script>

<link href="vendors/datepicker.css" rel="stylesheet" media="screen">
<link href="vendors/uniform.default.css" rel="stylesheet" media="screen">
<link href="vendors/chosen.min.css" rel="stylesheet" media="screen">

<link href="vendors/wysiwyg/bootstrap-wysihtml5.css" rel="stylesheet" media="screen">

<script src="vendors/jquery-1.9.1.js"></script>
<script src="bootstrap/js/bootstrap.min.js"></script>
<script src="vendors/jquery.uniform.min.js"></script>
<script src="vendors/chosen.jquery.min.js"></script>
<script src="vendors/bootstrap-datepicker.js"></script>

<script src="vendors/wysiwyg/wysihtml5-0.3.0.js"></script>
<script src="vendors/wysiwyg/bootstrap-wysihtml5.js"></script>

<script src="vendors/wizard/jquery.bootstrap.wizard.min.js"></script>

<script type="text/javascript" src="vendors/jquery-validation/dist/jquery.validate.min.js"></script>
<script src="assets/form-validation.js"></script>
<script src="vendors/datatables/js/jquery.dataTables.min.js"></script>
<script src="assets/scripts.js"></script>
</script>

jQuery(document).ready(function() {
  FormValidation.init();
});

$(function() {
  $(".datepicker").datepicker();
  $(".uniform_on").uniform();
  $(".chzn-select").chosen();
  $(".textarea").wysihtml5();

  $('#rootwizard').bootstrapWizard({onTabShow: function(tab, navigation, index) {
    var $total = navigation.find('li').length;
    var $current = index+1;

```

```

var $percent = ($current/$total) * 100;
$('#rootwizard').find('.bar').css({ width:$percent+'%'});
// If it's the last tab then hide the last button and show the finish instead
if($current >= $total) {
    $('#rootwizard').find('.pager .next').hide();
    $('#rootwizard').find('.pager .finish').show();
    $('#rootwizard').find('.pager .finish').removeClass('disabled');
} else {
    $('#rootwizard').find('.pager .next').show();
    $('#rootwizard').find('.pager .finish').hide();
}
});
$('#rootwizard .finish').click(function() {
    alert('Finished!, Starting over!');
    $('#rootwizard').find("a[href*='tab1']").trigger('click');
});
</script>
<script>
$(function() {
    $(' .tooltip').tooltip();
    $(' .tooltip-left').tooltip({ placement: 'left' });
    $(' .tooltip-right').tooltip({ placement: 'right' });
    $(' .tooltip-top').tooltip({ placement: 'top' });
    $(' .tooltip-bottom').tooltip({ placement: 'bottom' });

    $(' .popover-left').popover({placement: 'left', trigger: 'hover'});
    $(' .popover-right').popover({placement: 'right', trigger: 'hover'});
    $(' .popover-top').popover({placement: 'top', trigger: 'hover'});
    $(' .popover-bottom').popover({placement: 'bottom', trigger: 'hover'});

    $(' .notification').click(function() {
        var $id = $(this).attr('id');
        switch($id) {
            case 'notification-sticky':
                $.jGrowl("Stick this!", { sticky: true });
                break;

            case 'notification-header':
                $.jGrowl("A message with a header", { header:
'Important' });
                break;

            default:
                $.jGrowl("Hello world!");
                break;
        }
    });
}
);

```

```

        });
    });
</script>
</body>

</html>

<?php
error_reporting(0);
ob_start();
include 'opendb.php';include 'functions.php';
if(isset($_POST['login'])){
session_start();

$username = clean($_POST["username"]);
$password = clean($_POST["password"]);

if($username == " OR $password == "){
    echo ("<SCRIPT LANGUAGE='JavaScript'> window.alert('Please Enter All
fields.....')
    javascript:history.go(-1)
    </SCRIPT>");
    exit;
}

    $resul = mysql_query("SELECT * from users where username='$username'
AND password = '$password' ");

    $rows = mysql_num_rows($resul);
    if($rows==1)
    {
        echo("<SCRIPT LANGUAGE='JavaScript'> window.alert('You Have Been Suspended
Contact The Administrator')
        javascript:history.go(-1)
        </SCRIPT>");
        exit;
    }
}

```

```

else{

$query = "SELECT * from users where username='$username' AND password = '$password'";
$result = mysql_query($query);
$rows=mysql_fetch_array($result);
$access=$rows['access'];
$dept=$rows['department'];
//echo $dept;exit;
$q1=$rows['name'];$id=$rows['id'];
$q2=$rows['surname'];
$full=$q1." ".$q2;
$_SESSION['id'] = $id;
$_SESSION['dept'] = $dept;
$_SESSION['username'] = $username;

$_SESSION['name'] = $full;
$_SESSION['access'] = $access;
if(!$result)
{
    die( "\n\ncould'nt send the query because".mysql_error());
    exit;
}

$row = mysql_num_rows($result);
if($row==1)
{
    mysql_query("insert into audit_tray(username,operation,time,date,login)
values('$username','Logged In','$time','$date','login')") or die(mysql_error());

    header("location: scripts/index.php");
    // $time = date('m/d/Y-h:m:s');$date = date('m/d/Y');
    exit;
}

else
{
echo("<SCRIPT LANGUAGE='JavaScript'> window.alert('Wrong Username And Password ')
    javascript:history.go(-1)
    </SCRIPT>");

}
}}
?><!DOCTYPE html>
<html>
<head>
<title>Admin Login</title>

```

```

<!-- Bootstrap -->
<link href="bootstrap/css/bootstrap.min.css" rel="stylesheet" media="screen">
<link href="bootstrap/css/bootstrap-responsive.min.css" rel="stylesheet" media="screen">
<link href="assets/styles.css" rel="stylesheet" media="screen">
<!-- HTML5 shim, for IE6-8 support of HTML5 elements -->
<!--[if lt IE 9]>
  <script src="http://html5shim.googlecode.com/svn/trunk/html5.js"></script>
<![endif]-->
<script src="js/vendor/modernizr-2.6.2-respond-1.1.0.min.js"></script>
</head>
<body id="login">
<center>
</center><br>

<div class="container">

  <form class="form-signin">
    <h2 class="form-signin-heading">Please sign in</h2>
    <input type="text" class="input-block-level" placeholder="Username" name="username">
    <input type="password" class="input-block-level" placeholder="Password"
name="password">

    <button class="btn btn-large btn-primary" type="submit">Sign in</button>
  </form>

</div> <!-- /container -->
<script src="vendors/jquery-1.9.1.min.js"></script>
<script src="bootstrap/js/bootstrap.min.js"></script>
</body>
</html>

```

```

<?php $rs=mysql_query("select * from users where access not in(1,4) order by name
asc,surname") or die(mysql_error());
?>
<center><h4>List of system users</h4><table width="65%" style="border:1px solid #000000"
border="1" bordercolor="#000000" >
  <tr>
    <td bgcolor="grey" width="80" style='border-style:outset;'><font
color="#000000">Name</font></td>
    <td bgcolor="grey" width="103" style='border-style:outset;'><font
color="#000000">Surname</font></td>
    <td bgcolor="grey" width="103" style='border-style:outset;'><font
color="#000000">Delete</font></td>

```

```
        <td bgcolor="grey" width="103" style="border-style: outset;"><font
color="#000000">Edit</font></td>
```

```
<?php
while($row = mysql_fetch_array($rs)){
    $name = $row['name'];
    $surname = $row['surname'];

    //$nationalid = $row['idnumber'];
    //$state= $row['state'];
    $class = $row['name'];
    $level= $row['level'];
    $id= $row['id'];

if($row['access']==2){ $a="edit1.php"; }
if($row['access']>=3){ $a="edit.php"; }
    echo "<tr><td style='border-style: outset;'>".$name."</td><td style='border-
style: outset;'>".$surname."</td><td style='border-style: outset;'><a
href='index.php?page=delete_users.php&id=$id' onclick='return confirm(\"Are you sure you
want to delete this record?\")'>[click to delete]</a></font></td><td style='border-
style: outset;'><a href='index.php?page=$a&id=$id' onclick='return confirm(\"Are you sure you
want to edit this record?\")'>[click to edit]</a></font></td style='border-style: outset;'></tr>";

    }

?>    </tr></table></center>
```

```
<!doctype html>
<html>
<head>
<meta charset="utf-8">
<title>Untitled Document</title>
</head>

<body>
<?php $rs=mysql_query("select * from users where access=4 order by name asc,surname") or
die(mysql_error());
?>
<center><h4>List of students</h4><table width="65%" style="border:1px solid #000000"
border="1" bordercolor="#000000" class="table table-striped table-bordered" >
    <tr>
```



```

                <td width="80" style='border-style:outset;'><font
color="#000000">Name</font></td>
                <td width="103" style='border-style:outset;'><font
color="#000000">Surname</font></td>
                <td width="103" style='border-style:outset;'><font
color="#000000">Email</font></td>
                <td width="103" style='border-style:outset;'><font
color="#000000">Action</font></td>

```

```

<?php
while($row = mysql_fetch_array($rs)){
    $name = $row['name'];
    $surname = $row['surname'];

    // $nationalid = $row['idnumber'];
    // $state= $row['state'];
    $class = $row['email'];
    $level= $row['level'];
    $id= $row['id'];

if($row['access']==2){ $a="edit1.php";}
if($row['access']>=3){ $a="edit.php";}
    echo "<tr><td style='border-style:outset;'>".$name."</td><td style='border-
style:outset;'>".$surname."</td><td style='border-style:outset;'>".$class."</td><td style='border-
style:outset;'>

                <a href='index.php?page=punishnow.php&id=$id' onclick='return
confirm(\"Are you sure you want to process?\")'><button class='btn btn-primary'>Punish
Student</button></a>

        </td style='border-style:outset;'></tr>";

    }

?> </tr></table></center>

</body>
</html>

<!doctype html>

```

```

<html>
<head>
<meta charset="utf-8">
<title>Untitled Document</title>
</head>

<body>

<?php
//include('../functions.php');
$formtitle="Manage Offenses and Sanctions";
if(isset($_POST['Submit'])){
$rs1 = mysql_query("select * from punishment where studentid = '$_GET[id]' and
status='Pending'");
$rw = mysql_num_rows($rs1);
if($rw == 1){
?>
<script language="javascript">
alert("Student already punished for today!");
location = 'index.php?page=punishnow.php'
</script>
<?php
exit;
}
$rs = mysql_query("INSERT INTO `punishment` (`studentid`, `offenseid`, `details`,
`punishmentdate`, `stewardid`) VALUES ('$_GET[id]', '$_POST[product]', '$_POST[details]',
NOW(), '$_SESSION[id]') or die(mysql_error());
/*$res = mysql_query("insert into audit_tray(id,username,operation,date)
values(NULL,'1','Added new user $name $surname','$date')") or die(mysql_error());*/
$data=GetEmail($_GET['id']);
$name = $data[0];
$email = $data[1];

$data1=GetOffense($_POST['product']);
$offense = $data[0];
$sanction = $data[1];
$duration = $data[2];
$msg="Good day $name <br>
You have been punished for <strong>$offense</strong><br>
<br>
You will be sanctioned to <br>
<strong>$sanction</strong>
<br>
<br>
For <strong>$duration Hours </strong> THis Coming Friday<br>

```

You are required to be present for these sanctions ";
 Sendaemail(\$msg,\$email);

```
if($rs){
    ?>
    <script language="javascript">
    alert("successfully updated")
    location = 'index.php?page=punish.php'
    </script>
    <?php
    }
    else
    {
    echo "problem occurred";
    }
    }
?>
<form action="" method="post" name="" >

    <center>
    <table width="80%" border="0">

        <tr>
            <td>Offense/Misdemeanors</td>
            <td>
                <?php

                $sql="SELECT * FROM `sanction`;
                $rez=mysql_query($sql);
                ?>
                <select name='product' id ='product' required >

                <?php
                while($row=mysql_fetch_array($rez,MYSQL_ASSOC))
                {
                echo "<option value='{ $row['sid']}'>{ $row['offense']}</option>";
                }

                ?></span></select>                </td>
            </tr>
            <tr>
                <td width="267"> Details</td>
                <td width="287">
```

```

        <textarea name="details" placeholder="eg Making noise during assembly"
required></textarea>        </td>
    </tr>
    <tr>
        <td>Status </td>
        <td>
            <input name="FormClass" type="text" id="FormClass" required="required"
value="Pending" readonly />        </td>
    </tr>
    <tr>
        <td></td>
        <td>
            <input name="Submit" type="Submit" id="Submit" value="Save" class="btn btn-
primary" data-original-title="Click to process Information" /> <a
href="" > <button class="btn btn-primary"> Cancel</button></a>        </td>
    </tr>
</table>

```

```

<?php
if(isset($_POST['Submit'])){

    $date = date('m/d/Y');
    $name = $_POST['name'];
    $surname = $_POST['surname'];
    $username = $_SESSION['username'];
    $id_no = $_POST['id_first_digit']."-".$_POST['id_second_digit']."-
".$_POST['id_third_letters']."-".$_POST['id_forth_digit'];
    $rs1 = mysql_query("select * from users where username = '".$_POST[username]'");
    $rw = mysql_num_rows($rs1);
    if($rw == 1){
        ?>
        <script language="javascript">
alert("Username already in use");
location = 'index.php?page=registration.php'
        </script>
        <?php
        exit;
        }
        $rs1 = mysql_query("select * from users where idnumber = '$id_no'");
        $rw = mysql_num_rows($rs1);
        if($rw == 1){
            ?>
            <script language="javascript">

```

```

alert("ID Number already in use");
location = 'index.php?page=registration.php'
</script>
<?php
exit;
}
if($_POST['password']!= $_POST['cpass']){
?>
<script language="javascript">
alert("Password did not match with confirm password");
location = 'index.php?page=registration.php'
</script>
<?php
exit;
}
if(strlen($_POST['password']) < 8 ){
?>
<script language="javascript">
alert("Password should be above 8 charactors");
location = 'index.php?page=registration.php'
</script>
<?php
exit;
}
else{
    $number=$_POST['country'].$_POST['contact'];
    $rs = mysql_query("insert into
users(name,surname,sex,email,username,password,idnumber,date,access) values
($_POST[name],'$_POST[surname]','$_POST[sex]','$_POST[email]','$_POST[username]','$_P
OST[password]','$number','$date','$_POST[access]')") or die(mysql_error()."dbgfd");
/*$res = mysql_query("insert into audit_tray(id,username,operation,date)
values(NULL,'1','Added new user $name $surname','$date')") or die(mysql_error());*/

    if($rs){
?>
<script language="javascript">
alert("User successfully created");
location = 'index.php?page=home.php'
</script>
<?php

}
else
{
echo "problem occured";
}
}

```

```
}  
}  
?>
```

```
<script src="SpryAssets/SpryValidationTextField.js" type="text/javascript"></script>  
<script type="text/javascript">  
<!--  
function MM_validateForm() { //v4.0  
  if (document.getElementById){  
    var i,p,q,nm,test,num,min,max,errors="",args=MM_validateForm.arguments;  
    for (i=0; i<(args.length-2); i+=3) { test=args[i+2]; val=document.getElementById(args[i]);  
    if (val) { nm=val.name; if ((val=val.value)!="") {  
      if (test.indexOf('isEmail')!=-1) { p=val.indexOf('@');  
        if (p<1 || p==(val.length-1)) errors+='- '+nm+' must contain an e-mail address.\n';  
      } else if (test!='R') { num = parseFloat(val);  
        if (isNaN(val)) errors+='- '+nm+' must contain a number.\n';  
        if (test.indexOf('inRange') != -1) { p=test.indexOf(':');  
          min=test.substring(8,p); max=test.substring(p+1);  
          if (num<min || max<num) errors+='- '+nm+' must contain a number between '+min+' and  
'+max+'.\n';  
        } } } else if (test.charAt(0) == 'R') errors += '- '+nm+' is required.\n'; }  
    } if (errors) alert("The following error(s) occurred:\n'+errors);  
    document.MM_returnValue = (errors == "");  
  } }  
  //-->  
</script>  
<link href="../../SpryAssets/SpryValidationTextField.css" rel="stylesheet" type="text/css" />  
<style type="text/css">  
<!--  
.style7 {  
  font-size: 18px;  
  color: #000000;  
}  
.style8 {  
  color: #000000;  
  font-style: italic;  
  font-weight: bold;  
  font-size: 18px;  
}  
-->  
</style>  
<script language="javascript">  
function lettersOnly(evt) {  
  evt = (evt) ? evt : event;  
  var charCode = (evt.charCode) ? evt.charCode : ((evt.keyCode) ? evt.keyCode :  
  ((evt.which) ? evt.which : 0));
```

```

if ( (charCode < 65 || charCode > 90 ) &&
(charCode < 97 || charCode > 122)) {
if(charCode != 8){
alert("Enter letters only.");
return false;
}

}
return true;
}
</script>
<div class="style4">
  <div align="center"><em>User Registration</em></div>
</div>
<form action="" method="post" name="" >

  <table width="80%" border="0" bgcolor="#FFFFFF" align="center" style="border-top:3px
solid #000000;">

    <tr><td colspan="2"><div align="center">
      <p class="style3 style5">Please Enter the user details below to create a new system
user.</p>
      <p class="style5 style3"><strong>Note: All fields should be filled.</strong></p>
      <p class="style3 style7"><em><strong><u>General Details</u></strong></em></p>
    </div></td>
    </tr>
    <tr>
      <td>Name</td>
      <td>
        <input name="name" type="text" id="name" onkeypress="return lettersOnly(event)"
required="required" />
      </td>
    </tr>
    <tr>
      <td width="267"> Surname</td>
      <td width="287">
        <input name="surname" type="text" id="surname" onkeypress="return
lettersOnly(event)" required="required" />
      </td>
    </tr>
    <tr>
      <td>E mail</td>
      <td>
        <input name="email" type="email" id="email" required />
      </td>
    </tr>
  <!-- <tr>

```

```

        <td>Department</td>
        <td -->
        <?php

// $sql="select * from dept";
// $rez=mysql_query($sql);
?>
<!-- <select name='dept' id ='dept' required>
<option value="">--- Department ---</option> -->
<?php
// while($row=mysql_fetch_array($rez,MYSQL_ASSOC))
// {
// echo "<option value='{ $row['department'] }'>{ $row['department'] }</option>";
// }

?><!-- </span></select>          </td>
        </tr><tr -->
        <td>Sex</td>
        <td>
        <select name="sex"><option>male</option><option>female</option></select>
</td>
</tr>

        <tr><td>Cellphone*</td><td><select name="country" id="" required>
        <option data-countryCode="ZW" value="263">Zimbabwe (+263)</option>
        <option data-countryCode="ZA" value="27">South Africa (+27)</option>
        <option data-countryCode="US" value="1">USA (+1)</option>
        <option data-countryCode="GB" value="44">UK (+44)</option>
        <option data-countryCode="BW" value="267">Botswana (+267)</option>
        <option data-countryCode="ZM" value="260">Zambia (+260)</option>
        <option data-countryCode="ZM" value="255">Tanzania (+255)</option>

        <optgroup label="Other countries">
        <option data-countryCode="DZ" value="213">Algeria (+213)</option>
        <option data-countryCode="AD" value="376">Andorra (+376)</option>
        <option data-countryCode="AO" value="244">Angola (+244)</option>
        <option data-countryCode="AI" value="1264">Anguilla (+1264)</option>
        <option data-countryCode="AG" value="1268">Antigua & Barbuda (+1268)</option>
        <option data-countryCode="AR" value="54">Argentina (+54)</option>
        <option data-countryCode="AM" value="374">Armenia (+374)</option>
        <option data-countryCode="AW" value="297">Aruba (+297)</option>
        <option data-countryCode="AU" value="61">Australia (+61)</option>
        <option data-countryCode="AT" value="43">Austria (+43)</option>

```


<option data-countryCode="AZ" value="994">Azerbaijan (+994)</option>
<option data-countryCode="BS" value="1242">Bahamas (+1242)</option>
<option data-countryCode="BH" value="973">Bahrain (+973)</option>
<option data-countryCode="BD" value="880">Bangladesh (+880)</option>
<option data-countryCode="BB" value="1246">Barbados (+1246)</option>
<option data-countryCode="BY" value="375">Belarus (+375)</option>
<option data-countryCode="BE" value="32">Belgium (+32)</option>
<option data-countryCode="BZ" value="501">Belize (+501)</option>
<option data-countryCode="BJ" value="229">Benin (+229)</option>
<option data-countryCode="BM" value="1441">Bermuda (+1441)</option>
<option data-countryCode="BT" value="975">Bhutan (+975)</option>
<option data-countryCode="BO" value="591">Bolivia (+591)</option>
<option data-countryCode="BA" value="387">Bosnia Herzegovina (+387)</option>
<option data-countryCode="BW" value="267">Botswana (+267)</option>
<option data-countryCode="BR" value="55">Brazil (+55)</option>
<option data-countryCode="BN" value="673">Brunei (+673)</option>
<option data-countryCode="BG" value="359">Bulgaria (+359)</option>
<option data-countryCode="BF" value="226">Burkina Faso (+226)</option>
<option data-countryCode="BI" value="257">Burundi (+257)</option>
<option data-countryCode="KH" value="855">Cambodia (+855)</option>
<option data-countryCode="CM" value="237">Cameroon (+237)</option>
<option data-countryCode="CA" value="1">Canada (+1)</option>
<option data-countryCode="CV" value="238">Cape Verde Islands (+238)</option>
<option data-countryCode="KY" value="1345">Cayman Islands (+1345)</option>
<option data-countryCode="CF" value="236">Central African Republic (+236)</option>
<option data-countryCode="CL" value="56">Chile (+56)</option>
<option data-countryCode="CN" value="86">China (+86)</option>
<option data-countryCode="CO" value="57">Colombia (+57)</option>
<option data-countryCode="KM" value="269">Comoros (+269)</option>
<option data-countryCode="CG" value="242">Congo (+242)</option>
<option data-countryCode="CK" value="682">Cook Islands (+682)</option>
<option data-countryCode="CR" value="506">Costa Rica (+506)</option>
<option data-countryCode="HR" value="385">Croatia (+385)</option>
<option data-countryCode="CU" value="53">Cuba (+53)</option>
<option data-countryCode="CY" value="90392">Cyprus North (+90392)</option>
<option data-countryCode="CY" value="357">Cyprus South (+357)</option>
<option data-countryCode="CZ" value="42">Czech Republic (+42)</option>
<option data-countryCode="DK" value="45">Denmark (+45)</option>
<option data-countryCode="DJ" value="253">Djibouti (+253)</option>
<option data-countryCode="DM" value="1809">Dominica (+1809)</option>
<option data-countryCode="DO" value="1809">Dominican Republic (+1809)</option>
<option data-countryCode="EC" value="593">Ecuador (+593)</option>
<option data-countryCode="EG" value="20">Egypt (+20)</option>
<option data-countryCode="SV" value="503">El Salvador (+503)</option>
<option data-countryCode="GQ" value="240">Equatorial Guinea (+240)</option>
<option data-countryCode="ER" value="291">Eritrea (+291)</option>

<option data-countryCode="EE" value="372">Estonia (+372)</option>
<option data-countryCode="ET" value="251">Ethiopia (+251)</option>
<option data-countryCode="FK" value="500">Falkland Islands (+500)</option>
<option data-countryCode="FO" value="298">Faroe Islands (+298)</option>
<option data-countryCode="FJ" value="679">Fiji (+679)</option>
<option data-countryCode="FI" value="358">Finland (+358)</option>
<option data-countryCode="FR" value="33">France (+33)</option>
<option data-countryCode="GF" value="594">French Guiana (+594)</option>
<option data-countryCode="PF" value="689">French Polynesia (+689)</option>
<option data-countryCode="GA" value="241">Gabon (+241)</option>
<option data-countryCode="GM" value="220">Gambia (+220)</option>
<option data-countryCode="GE" value="7880">Georgia (+7880)</option>
<option data-countryCode="DE" value="49">Germany (+49)</option>
<option data-countryCode="GH" value="233">Ghana (+233)</option>
<option data-countryCode="GI" value="350">Gibraltar (+350)</option>
<option data-countryCode="GR" value="30">Greece (+30)</option>
<option data-countryCode="GL" value="299">Greenland (+299)</option>
<option data-countryCode="GD" value="1473">Grenada (+1473)</option>
<option data-countryCode="GP" value="590">Guadeloupe (+590)</option>
<option data-countryCode="GU" value="671">Guam (+671)</option>
<option data-countryCode="GT" value="502">Guatemala (+502)</option>
<option data-countryCode="GN" value="224">Guinea (+224)</option>
<option data-countryCode="GW" value="245">Guinea - Bissau (+245)</option>
<option data-countryCode="GY" value="592">Guyana (+592)</option>
<option data-countryCode="HT" value="509">Haiti (+509)</option>
<option data-countryCode="HN" value="504">Honduras (+504)</option>
<option data-countryCode="HK" value="852">Hong Kong (+852)</option>
<option data-countryCode="HU" value="36">Hungary (+36)</option>
<option data-countryCode="IS" value="354">Iceland (+354)</option>
<option data-countryCode="IN" value="91">India (+91)</option>
<option data-countryCode="ID" value="62">Indonesia (+62)</option>
<option data-countryCode="IR" value="98">Iran (+98)</option>
<option data-countryCode="IQ" value="964">Iraq (+964)</option>
<option data-countryCode="IE" value="353">Ireland (+353)</option>
<option data-countryCode="IL" value="972">Israel (+972)</option>
<option data-countryCode="IT" value="39">Italy (+39)</option>
<option data-countryCode="JM" value="1876">Jamaica (+1876)</option>
<option data-countryCode="JP" value="81">Japan (+81)</option>
<option data-countryCode="JO" value="962">Jordan (+962)</option>
<option data-countryCode="KZ" value="7">Kazakhstan (+7)</option>
<option data-countryCode="KE" value="254">Kenya (+254)</option>
<option data-countryCode="KI" value="686">Kiribati (+686)</option>
<option data-countryCode="KP" value="850">Korea North (+850)</option>
<option data-countryCode="KR" value="82">Korea South (+82)</option>
<option data-countryCode="KW" value="965">Kuwait (+965)</option>
<option data-countryCode="KG" value="996">Kyrgyzstan (+996)</option>

<option data-countryCode="LA" value="856">Laos (+856)</option>
<option data-countryCode="LV" value="371">Latvia (+371)</option>
<option data-countryCode="LB" value="961">Lebanon (+961)</option>
<option data-countryCode="LS" value="266">Lesotho (+266)</option>
<option data-countryCode="LR" value="231">Liberia (+231)</option>
<option data-countryCode="LY" value="218">Libya (+218)</option>
<option data-countryCode="LI" value="417">Liechtenstein (+417)</option>
<option data-countryCode="LT" value="370">Lithuania (+370)</option>
<option data-countryCode="LU" value="352">Luxembourg (+352)</option>
<option data-countryCode="MO" value="853">Macao (+853)</option>
<option data-countryCode="MK" value="389">Macedonia (+389)</option>
<option data-countryCode="MG" value="261">Madagascar (+261)</option>
<option data-countryCode="MW" value="265">Malawi (+265)</option>
<option data-countryCode="MY" value="60">Malaysia (+60)</option>
<option data-countryCode="MV" value="960">Maldives (+960)</option>
<option data-countryCode="ML" value="223">Mali (+223)</option>
<option data-countryCode="MT" value="356">Malta (+356)</option>
<option data-countryCode="MH" value="692">Marshall Islands (+692)</option>
<option data-countryCode="MQ" value="596">Martinique (+596)</option>
<option data-countryCode="MR" value="222">Mauritania (+222)</option>
<option data-countryCode="YT" value="269">Mayotte (+269)</option>
<option data-countryCode="MX" value="52">Mexico (+52)</option>
<option data-countryCode="FM" value="691">Micronesia (+691)</option>
<option data-countryCode="MD" value="373">Moldova (+373)</option>
<option data-countryCode="MC" value="377">Monaco (+377)</option>
<option data-countryCode="MN" value="976">Mongolia (+976)</option>
<option data-countryCode="MS" value="1664">Montserrat (+1664)</option>
<option data-countryCode="MA" value="212">Morocco (+212)</option>
<option data-countryCode="MZ" value="258">Mozambique (+258)</option>
<option data-countryCode="MN" value="95">Myanmar (+95)</option>
<option data-countryCode="NA" value="264">Namibia (+264)</option>
<option data-countryCode="NR" value="674">Nauru (+674)</option>
<option data-countryCode="NP" value="977">Nepal (+977)</option>
<option data-countryCode="NL" value="31">Netherlands (+31)</option>
<option data-countryCode="NC" value="687">New Caledonia (+687)</option>
<option data-countryCode="NZ" value="64">New Zealand (+64)</option>
<option data-countryCode="NI" value="505">Nicaragua (+505)</option>
<option data-countryCode="NE" value="227">Niger (+227)</option>
<option data-countryCode="NG" value="234">Nigeria (+234)</option>
<option data-countryCode="NU" value="683">Niue (+683)</option>
<option data-countryCode="NF" value="672">Norfolk Islands (+672)</option>
<option data-countryCode="NP" value="670">Northern Marianas (+670)</option>
<option data-countryCode="NO" value="47">Norway (+47)</option>
<option data-countryCode="OM" value="968">Oman (+968)</option>
<option data-countryCode="PW" value="680">Palau (+680)</option>
<option data-countryCode="PA" value="507">Panama (+507)</option>

<option data-countryCode="PG" value="675">Papua New Guinea (+675)</option>
<option data-countryCode="PY" value="595">Paraguay (+595)</option>
<option data-countryCode="PE" value="51">Peru (+51)</option>
<option data-countryCode="PH" value="63">Philippines (+63)</option>
<option data-countryCode="PL" value="48">Poland (+48)</option>
<option data-countryCode="PT" value="351">Portugal (+351)</option>
<option data-countryCode="PR" value="1787">Puerto Rico (+1787)</option>
<option data-countryCode="QA" value="974">Qatar (+974)</option>
<option data-countryCode="RE" value="262">Reunion (+262)</option>
<option data-countryCode="RO" value="40">Romania (+40)</option>
<option data-countryCode="RU" value="7">Russia (+7)</option>
<option data-countryCode="RW" value="250">Rwanda (+250)</option>
<option data-countryCode="SM" value="378">San Marino (+378)</option>
<option data-countryCode="ST" value="239">Sao Tome & Principe (+239)</option>
<option data-countryCode="SA" value="966">Saudi Arabia (+966)</option>
<option data-countryCode="SN" value="221">Senegal (+221)</option>
<option data-countryCode="CS" value="381">Serbia (+381)</option>
<option data-countryCode="SC" value="248">Seychelles (+248)</option>
<option data-countryCode="SL" value="232">Sierra Leone (+232)</option>
<option data-countryCode="SG" value="65">Singapore (+65)</option>
<option data-countryCode="SK" value="421">Slovak Republic (+421)</option>
<option data-countryCode="SI" value="386">Slovenia (+386)</option>
<option data-countryCode="SB" value="677">Solomon Islands (+677)</option>
<option data-countryCode="SO" value="252">Somalia (+252)</option>

<option data-countryCode="ES" value="34">Spain (+34)</option>
<option data-countryCode="LK" value="94">Sri Lanka (+94)</option>
<option data-countryCode="SH" value="290">St. Helena (+290)</option>
<option data-countryCode="KN" value="1869">St. Kitts (+1869)</option>
<option data-countryCode="SC" value="1758">St. Lucia (+1758)</option>
<option data-countryCode="SD" value="249">Sudan (+249)</option>
<option data-countryCode="SR" value="597">Suriname (+597)</option>
<option data-countryCode="SZ" value="268">Swaziland (+268)</option>
<option data-countryCode="SE" value="46">Sweden (+46)</option>
<option data-countryCode="CH" value="41">Switzerland (+41)</option>
<option data-countryCode="SI" value="963">Syria (+963)</option>
<option data-countryCode="TW" value="886">Taiwan (+886)</option>
<option data-countryCode="TJ" value="7">Tajikstan (+7)</option>
<option data-countryCode="TH" value="66">Thailand (+66)</option>
<option data-countryCode="TG" value="228">Togo (+228)</option>
<option data-countryCode="TO" value="676">Tonga (+676)</option>
<option data-countryCode="TT" value="1868">Trinidad & Tobago (+1868)</option>
<option data-countryCode="TN" value="216">Tunisia (+216)</option>
<option data-countryCode="TR" value="90">Turkey (+90)</option>
<option data-countryCode="TM" value="7">Turkmenistan (+7)</option>
<option data-countryCode="TM" value="993">Turkmenistan (+993)</option>

```

<option data-countryCode="TC" value="1649">Turks & Caicos Islands (+1649)</option>
<option data-countryCode="TV" value="688">Tuvalu (+688)</option>
<option data-countryCode="UG" value="256">Uganda (+256)</option>

<option data-countryCode="UA" value="380">Ukraine (+380)</option>
<option data-countryCode="AE" value="971">United Arab Emirates (+971)</option>
<option data-countryCode="UY" value="598">Uruguay (+598)</option>
<!-- <option data-countryCode="US" value="1">USA (+1)</option> -->
<option data-countryCode="UZ" value="7">Uzbekistan (+7)</option>
<option data-countryCode="VU" value="678">Vanuatu (+678)</option>
<option data-countryCode="VA" value="379">Vatican City (+379)</option>
<option data-countryCode="VE" value="58">Venezuela (+58)</option>
<option data-countryCode="VN" value="84">Vietnam (+84)</option>
<option data-countryCode="VG" value="84">Virgin Islands - British (+1284)</option>
<option data-countryCode="VI" value="84">Virgin Islands - US (+1340)</option>
<option data-countryCode="WF" value="681">Wallis & Futuna (+681)</option>
<option data-countryCode="YE" value="969">Yemen (North)(+969)</option>
<option data-countryCode="YE" value="967">Yemen (South)(+967)</option>
<option data-countryCode="ZM" value="260">Zambia (+260)</option>
<option data-countryCode="ZW" value="263">Zimbabwe (+263)</option>
</optgroup>
</select><input name="contact" type="number" id="contact" min="700000000"
max="790000000" required="required" placeholder="eg 774002797"></td></tr>

```

```

<tr><td colspan="2"><div align="center"><span class="style8"><u>Login
Details</u></span></div></td>
</tr>
<tr>
<td>User Name</td>
<td>
<input name="username" type="text" id="username" required /> </td>
</tr>
<tr>
<td width="267">Password</td>
<td width="287"><span id="sprytextfield1">
<input name="password" type="password" id="password" required />
<br />
Password Should Be at least 8 characters</span><span
class="textfieldMinCharsMsg">.</span></span></td>
</tr>
<tr>
<td>Confirm </td>
<td>
<input name="cpass" type="password" id="cpass" required /> </td></tr>
</tr>

```



```

        <td>Access Level</td>
        <td> <select name="access" required><option value="2">Staff</option> <option
value="3">Manager</option><option value="1">Admin</option></select> </td>
</tr>
        <tr>
        <td></td>
        <td>
        <input name="Submit" type="Submit" id="Submit" value="Save" /> </td>
</tr>
</table>

</form>

```

```

<?php
if(isset($_POST['Submit'])){

    $date = date('m/d/Y');
    $name = clean($_POST['name']);
    $surname = clean($_POST['surname']);
    $username = $_SESSION['username'];
    $id_no = $_POST['id_first_digit']."-".$_POST['id_second_digit']."-
".$_POST['id_third_letters']."-".$_POST['id_forth_digit'];
    $rs1 = mysql_query("select * from users where username = '".$_POST['username']."'");
    $rw = mysql_num_rows($rs1);
    if($rw == 1){
        ?>
        <script language="javascript">
        alert("Username already in use");
        location = 'index.php?page=registration.php'
        </script>
        <?php
        exit;
        }
        if (!preg_match("/^[A-Za-z\\- \\]+$/",$_POST['name'])) {
        echo "Invalid Name";
        exit;
    }if (!preg_match("/^[A-Za-z\\- \\]+$/",$_POST['surname'])) {
        echo "Invalid Surname";
        exit;
    }

    $rs1 = mysql_query("select * from users where idnumber = '$id_no'");

```

```

$rw = mysql_num_rows($rs1);
if($rw == 1){
?>
<script language="javascript">
alert("ID Number already in use");
location = 'index.php?page=registration.php'
</script>
<?php
exit;
}
if($_POST['password']!= $_POST['cpass']){
?>
<script language="javascript">
alert("Password did not match with confirm password");
location = 'index.php?page=registration.php'
</script>
<?php
exit;
}
if(strlen($_POST['password']) < 8 ){
?>
<script language="javascript">
alert("Password should be above 8 charactors");
location = 'index.php?page=registration.php'
</script>
<?php
exit;
}else{
    $number=$_POST['country'].$_POST['contact'];
    $rs = mysql_query("insert into
users(name,surname,sex,email,username,password,idnumber,date,department,access) values
($_POST[name],'$_POST[surname]','$_POST[sex]','$_POST[email]','$_POST[username]','$_P
OST[password]','$number','$date','$_POST[product]','$_POST[access]')") or die(mysql_error());
/*$res = mysql_query("insert into audit_tray(id,username,operation,date)
values(NULL,'1','Added new user $name $surname','$date')") or die(mysql_error());*/

if($rs){

?>

<script language="javascript">
alert("Process was successful");
location = 'index.php?page=registration.php'
</script>
<?php
// echo SuccessBubble("Process was successful");

```

```

}
else
{
echo "problem ocured";
}
}
}
?>

```

```

<script src="SpryAssets/SpryValidationTextField.js" type="text/javascript"></script>
<script type="text/javascript">
<!--
function MM_validateForm() { //v4.0
  if (document.getElementById){
    var i,p,q,nm,test,num,min,max,errors="",args=MM_validateForm.arguments;
    for (i=0; i<(args.length-2); i+=3) { test=args[i+2]; val=document.getElementById(args[i]);
      if (val) { nm=val.name; if ((val=val.value)!="") {
        if (test.indexOf('isEmail')!=-1) { p=val.indexOf('@');
          if (p<1 || p==(val.length-1)) errors+='- '+nm+' must contain an e-mail address.\n';
        } else if (test!='R') { num = parseFloat(val);
          if (isNaN(val)) errors+='- '+nm+' must contain a number.\n';
          if (test.indexOf('inRange') != -1) { p=test.indexOf(':');
            min=test.substring(8,p); max=test.substring(p+1);
            if (num<min || max<num) errors+='- '+nm+' must contain a number between '+min+' and
'+max+'.\n';
          } } } else if (test.charAt(0) == 'R') errors += '- '+nm+' is required.\n'; }
      } if (errors) alert('The following error(s) occurred:\n'+errors);
      document.MM_returnValue = (errors == "");
    } }
  }
  //-->
</script>
<link href="../../SpryAssets/SpryValidationTextField.css" rel="stylesheet" type="text/css" />
<style type="text/css">
<!--
.style7 {
  font-size: 18px;
  color: #000000;
}
.style8 {
  color: #000000;
  font-style: italic;
  font-weight: bold;
  font-size: 18px;
}
-->
</style>

```



```

<script language="javascript">
function lettersOnly(evt) {
evt = (evt) ? evt : event;
var charCode = (evt.charCode) ? evt.charCode : ((evt.keyCode) ? evt.keyCode :
((evt.which) ? evt.which : 0));
if ( ( charCode < 65 || charCode > 90 ) &&
(charCode < 97 || charCode > 122)) {
if(charCode != 8){
alert("Enter letters only.");
return false;
}
}
return true;
}
</script>
<div class="style4">
  <div align="center"><em>User Registration</em></div>
</div>
<form action="" method="post" name="" >

  <center>
  <table width="40%" border="0">

    <tr><td colspan="2"><div align="center">
      <p class="style3 style5">Please Enter the user details below to create a new system
user.</p>
      <p class="style5 style3"><strong>Note: All fields should be filled.</strong></p>
      <p class="style3 style7"><em><strong><u>General Details</u></strong></em></p>
    </div></td>
    </tr>
    <tr>
      <td>Name</td>
      <td>
        <input name="name" type="text" id="name" required="required" />
      </td>
    </tr>
    <tr>
      <td width="267"> Surname</td>
      <td width="287">
        <input name="surname" type="text" id="surname" required="required" />
      </td>
    </tr>
    <tr>
      <td>
        <input name="email" type="text" id="email" required="required" />
      </td>
      <td>
        <input name="password" type="password" id="password" required="required" />
      </td>
    </tr>
  </table>
  </center>
  </form>

```

```
        <input name="email" type="email" id="email" required="required" />      </td>
    </tr>
```

```
    <tr>
        <td>Department or Committee</td>
        <td>
            <?php
```

```
$sql="select * from dept";
$rez=mysql_query($sql);
?>
<select name='product' id ='product' required class="chzn-select">
```

```
<?php
while($row=mysql_fetch_array($rez,MYSQL_ASSOC))
{
    echo "<option value='{ $row['did']}'>{ $row['department']}</option>";
}
```

```
?></span></select>      </td>
    </tr>
```

```
    <tr><td colspan="2"><div align="center"><span class="style8"><u>Login
Details</u></span></div></td>
```

```
    </tr>
```

```
    <tr>
```

```
        <td>User Name</td>
```

```
        <td>
```

```
            <input name="username" type="text" id="username" required="required" />      </td>
```

```
        </tr>
```

```
        <tr>
```

```
            <td width="267">Password</td>
```

```
            <td width="287"><span id="sprytextfield1">
```

```
                <input name="password" type="password" id="password" required="required" />
```

```
                <br />
```

```
                Password Should Be at least 8 characters</span><span
class="textfieldMinCharsMsg">.</span></span></td>
```

```
            </tr>
```

```
            <tr>
```

```
                <td>Confirm </td>
```

```

        <td>
            <input name="cpass" type="password" id="cpass" required="required" />
        </td></tr>
        <tr>
            <td>Access Level</td>
            <td><select name="access"><option value="2">Stewards</option> <option
value="3">Staff</option> <option value="1">Admin</option></select> </td>
        </tr>
        <tr>
            <td></td>
            <td>
                <input name="Submit" type="Submit" id="Submit" value="Save" class="btn btn-
primary" /> <a
href="" > <button class="btn btn-primary"> Cancel</button></a>
            </td>
        </tr>
    </table>

```

```

</form><hr>
<?php $rs=mysql_query("select * from users where access not in(1,4) order by name
asc,surname") or die(mysql_error());
?>
<center><h4>List of system users</h4><table width="65%" style="border:1px solid #000000"
border="1" bordercolor="#000000" class="table table-striped table-bordered" >
    <tr>

```

```

        <td width="80" style='border-style:outset;'><font
color="#000000">Name</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">Surname</font></td>
        <td width="103" style='border-style:outset;'><font color="#000000">User
Role</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">Action</font></td>

```

```

<?php
while($row = mysql_fetch_array($rs)){
    $name = $row['name'];
    $surname = $row['surname'];

    //$nationalid = $row['idnumber'];
    //$state= $row['state'];

```

```

        $class = $row['name'];
        $level= $row['level'];
        $id= $row['id'];

if($row['access']==2){ $a="Steward";}
if($row['access']==3){ $a="Staff";}
        echo "<tr><td style='border-style:outset;'>".$name."</td><td style='border-
style:outset;'>".$surname."</td><td style='border-style:outset;'>".$a."</td><td style='border-
style:outset;'>

                <div class='btn-group'>
                <button data-toggle='dropdown' class='btn btn-primary dropdown-toggle'>Action <span
class='caret'></span></button>

                                                                <ul
class='dropdown-menu'>
                                                                <li><a
href='index.php?page=edit.php&id=$id' onclick='return confirm(\"Are you sure you want to
edit?\")>Edit</a></li>
                                                                <li><a
href='index.php?page=delete_users.php&id=$id' onclick='return confirm(\"Are you sure you
want to delete?\")>Delete</a></li>

                                                                </ul></div>

        </td style='border-style:outset;'></tr>";

    }

?> </tr></table></center>

<!doctype html>
<html>
<head>
<meta charset="utf-8">
<title>Untitled Document</title>
</head>

<body>

<?php
//include('../functions.php');
$formtitle="Manage Offenses and Sanctions";
if(isset($_POST['Submit'])){

```

```

$rs = mysql_query("INSERT INTO `sanction` (`offense`, `sanction`, `user`, `duration`)
VALUES ('$_POST[offense]', '$_POST[sanctions]', '$_SESSION[user]', '$_POST[duration]')")
or die(mysql_error());
/*$res = mysql_query("insert into audit_tray(id,username,operation,date)
values('NULL','1','Added new user $name $surname','$date')") or die(mysql_error());*/

if($rs){
    // SuccessBubble("Process was successful");
    ?>
    <script language="javascript">
    alert("Process was successful")
    history.go(-1) </script>
    <?php
    }
    else
    {
    echo "problem ocured";
    }
    }
?>
<form action="" method="post" name="" >

    <center>
    <table width="80%" border="0">

        <tr>
        <td>Offense/Misdemeanors</td>
        <td>
            <input name="offense" type="text" id="offense" required="required" placeholder="eg
Noise Making" width="100%" /> </td>
        </tr>
        <tr>
        <td width="267"> Sanctions</td>
        <td width="287">
            <textarea name="sanctions" placeholder="eg Hard Labour" required></textarea>
        </td>
        </tr>
        <tr>
        <td width="267">Duraton Sanctions</td>
        <td width="287"><input type="number" name="duration" min="1" max="99"
step="any" maxlength="2"> Hours</td>
        </tr>
        <tr>
        <td></td>
        <td></td>

```

```

        <td>
            <input name="Submit" type="Submit" id="Submit" value="Save" class="btn btn-
primary" data-original-title="Click to process Information" /> <a
href="" > <button class="btn btn-primary"> Cancel</button></a>
        </td>
    </tr>
</table>

```

```

<hr>
<?php $rs=mysql_query("select * from sanction order by sid desc") or die(mysql_error());
?>
<center><h4>List Of Offenses and Sanctions</h4><table width="65%" style="border:1px solid
#000000" border="1" bordercolor="#000000" class="table table-striped table-bordered" >
    <tr>

```

```

        <td width="80" style='border-style:outset;'><font
color="#000000">Offense</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">Sanctions</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">Duration</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">Action</font></td>

```

```

<?php
while($row = mysql_fetch_array($rs)){
    echo "<tr><td style='border-style:outset;'>".$row['offense']. "</td><td
style='border-style:outset;'>".$row['sanction']. "</td><td style='border-
style:outset;'>".$row['duration']. " Hours</td><td style='border-style:outset;'>

        <div class='btn-group'>
            <button data-toggle='dropdown' class='btn btn-primary dropdown-toggle'>Action <span
class='caret'></span></button>
                <ul
class='dropdown-menu'>
                    <li><a
href='index.php?page=editsanction.php&id=$row[sid]' onclick='return confirm(\"Are you sure
you want to edit?\")'>Edit</a></li>
                    <li><a
href='index.php?page=deletsanctions.php&id=$row[sid]' onclick='return confirm(\"Are you sure
you want to delete?\")'>Delete</a></li>
                </ul></div>

```

```

        </td style='border-style:outset;'></tr>";

    }

?>    </tr></table></center><br>
<br>
<br>
<br>
<br>

</body>
</html>

<?php
    if(isset($_POST['Submit'])){

        $date = date('m/d/Y');
        $name = $_POST['name'];
        $surname = $_POST['surname'];
        $username = $_SESSION['username'];

        $rs = mysql_query("insert into
users(name,surname,sex,email,username,password,idnumber,date,department,access) values
('$_POST[name]',$_POST[surname]',$_POST[sex]',$_POST[email]',$_POST[username]',$_P
OST[password]',$_number','$date',$_POST[FormClass'],'4')") or die(mysql_error());
        /*$res = mysql_query("insert into audit_tray(id,username,operation,date)
values('NULL','1','Added new user $name $surname','$date')") or die(mysql_error());*/

        if($rs){
            // echo SuccessBubble("Process was successful");
            ?>
            <script language="javascript">
            alert("Process was successful")
            history.go(-1) </script>
            <?php
        }
        else
        {

```

```
    echo "problem occurred";
  }
}
```

?>

```
<script type="text/javascript">
<!--
function MM_validateForm() { //v4.0
  if (document.getElementById){
    var i,p,q,nm,test,num,min,max,errors="",args=MM_validateForm.arguments;
    for (i=0; i<(args.length-2); i+=3) { test=args[i+2]; val=document.getElementById(args[i]);
      if (val) { nm=val.name; if ((val=val.value)!="") {
        if (test.indexOf('isEmail')!=-1) { p=val.indexOf('@');
          if (p<1 || p==(val.length-1)) errors+='- '+nm+' must contain an e-mail address.\n';
        } else if (test!='R') { num = parseFloat(val);
          if (isNaN(val)) errors+='- '+nm+' must contain a number.\n';
          if (test.indexOf('inRange') != -1) { p=test.indexOf(':');
            min=test.substring(8,p); max=test.substring(p+1);
            if (num<min || max<num) errors+='- '+nm+' must contain a number between '+min+' and
'+max+'.\n';
          } } } else if (test.charAt(0) == 'R') errors += '- '+nm+' is required.\n'; }
      } if (errors) alert("The following error(s) occurred:\n"+errors);
      document.MM_returnValue = (errors == "");
    } }
  }
}
//-->
</script>
<link href="../../../SpryAssets/SpryValidationTextField.css" rel="stylesheet" type="text/css" />
<style type="text/css">
<!--
.style7 {
    font-size: 18px;
    color: #000000;
}
.style8 {
    color: #000000;
    font-style: italic;
    font-weight: bold;
    font-size: 18px;
}
-->
</style>
<script language="javascript">
function lettersOnly(evt) {
  evt = (evt) ? evt : event;
```



```

var charCode = (evt.charCode) ? evt.charCode : ((evt.keyCode) ? evt.keyCode :
((evt.which) ? evt.which : 0));
if ( ( charCode < 65 || charCode > 90 ) &&
(charCode < 97 || charCode > 122)) {
if(charCode != 8){
alert("Enter letters only.");
return false;
}

}
return true;
}
</script>
<div class="style4">
  <div align="center"><em><h4>Student Registration</h4></em></div>
</div>
<form action="" method="post" name="" >

  <center>
<table width="40%" border="0">

  <tr><td colspan="2"><div align="center">

</div></td>
</tr>
<tr>
  <td>Name</td>
  <td>
    <input name="name" type="text" id="name" onkeypress="return lettersOnly(event)"
required="required" />
  </td>
</tr>
<tr>
  <td width="267"> Surname</td>
  <td width="287">
    <input name="surname" type="text" id="surname" onkeypress="return
lettersOnly(event)" required="required" />
  </td>
</tr>

<tr>
  <td>E mail</td>
  <td>
    <input name="email" type="email" id="email" required="required" />
  </td>
</tr><tr>
  <td>Sex</td>
  <td>

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        <select name="sex"
required><option>male</option><option>female</option></select>    </td>
    </tr>
<tr>
    <td>FormClass </td>
    <td>
        <input name="FormClass" type="text" id="FormClass" required="required" />
    </td>
</tr>

    <tr>
    <td></td>
    <td>
        <input name="Submit" type="Submit" id="Submit" value="Save" class="btn btn-
primary" /> <a
href="" > <button class="btn btn-primary"> Cancel</button></a>    </td>
    </tr>
</table>

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</form><hr>
<?php $rs=mysql_query("select * from users where access=4 order by name asc,surname") or
die(mysql_error());
?>

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<center><h4>List of students</h4><table width="65%" style="border:1px solid #000000"
border="1" bordercolor="#000000" class="table table-striped table-bordered" >
    <tr>

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        <td width="80" style='border-style:outset;'><font
color="#000000">Name</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">Surname</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">Email</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">FormClass</font></td>
        <td width="103" style='border-style:outset;'><font
color="#000000">Action</font></td>

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<?php
while($row = mysql_fetch_array($rs)){

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$name = $row['name'];
$surname = $row['surname'];

$nationalid = $row['department'];
//$state= $row['state'];
$class = $row['email'];
$level= $row['level'];
$id= $row['id'];

if($row['access']==2){ $a="edit1.php";}
if($row['access']>=3){ $a="edit1.php";}
    echo "<tr><td style='border-style:outset;'>".$name."</td><td style='border-
style:outset;'>".$surname."</td><td style='border-style:outset;'>".$class."</td><td style='border-
style:outset;'>".$nationalid."</td><td style='border-style:outset;'>

        <div class='btn-group'>
            <button data-toggle='dropdown' class='btn btn-primary dropdown-toggle'>Action <span
class='caret'></span></button>
                                                                    <ul
class='dropdown-menu'>
                                                                    <li><a
href='index.php?page=$a&id=$id' onclick='return confirm(\"Are you sure you want to
edit?\")>Edit</a></li>
                                                                    <li><a
href='index.php?page=delete_user.php&id=$id' onclick='return confirm(\"Are you sure you want
to delete?\")>Delete</a></li>
                                                                    </ul></div>

    </td style='border-style:outset;'></tr>";

}

?> </tr></table></center><br>
<br>
<br>
<br>
<br>

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