Design and development of Advanced College Management System (CAMS) for Malcom Moffat College of Education
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Abstract—

Student Information Management Systems have become an important factor in modern educational institutions. These systems help learning institutions to manage student records and easily streamline administrative tasks and provide real-time access to data. This research focuses on the design and implementation of an Advanced College management system. The main objective of this project is to develop a system which uses personal computer to automate the administration procedures of Malcolm Moffat College and effectively and efficiently manage records using a Web-based application. The program will enable the college staff to enter information in the system which will generate a unique ID for each student at the time of admission. The staff will be able to manage the marks, fee information, accommodation, time tables, attendance, performance, notifications, personal information and all other academic information which is usually done manually. This ID will be used to reference the student in all the functions of this application. Since the system is automated, there is hardly any room left for human error, thus minimizing any potential complications in entering information and maintaining records. So, the researcher proposes a software application that will have a simple interface that would be easily understood by everyone with minimal cost and can be used in various education institutions for automating the administration work and efficiently manage the student database with minimal error possibility.

Keywords—College advanced management, admission system, college Database Management System, College Admin advanced System,

Introduction

All the major work of a college was done by pen and paper method with accompaniment of computer programs like excel for management of data. The admission department was manually forwarding the details of the students to other departments like examination department so that they can enter their details into their database. Technically until and unless the student has been registered into the university their details do not go to the examination department. As pointed out by Anigbo S (2000), the pen and paper method are very time consuming and takes in much more effort and time. Since each year the enrollments are ever increasing at the college because of its repute and performance, so is the amount of data relied to them, it is facing difficulties in maintaining the records of the students. It is thus required to build up a computerized system that can both work as the representing side of the college and the working side of the institution. It is necessary to build up a system that can work automatically with lesser effort than the previous method and also be hundred percent trustworthy.

Advanced college management system (CAMS) Information is an indispensable tool many colleges may use to advance decision making. Large amount of student's data is generated either manually or electronically on a daily basis. When the population of students in a college is less than a hundred, the manual system can work perfectly but it is not the

best method of managing records of students in large numbers like those at Malcom Moffat College of Education. Ezenma A (2014:113) stated that "The manual and disintegrated electronic systems have proved challenging because these methods of capturing and management of data about students are prone to data inconsistency, data redundancy, difficult to update and maintain, insecure, difficult to impose constraint on various data file and ultimately difficult to backup." Therefore, development of college advanced management system will give a better performance in arranging the lecturer and student information without having to do it manually. Furthermore, it will allow the lecturer to focus on other important tasks in the college. The integrated student database system which captures and maintains longitudinal data of students would provide an accurate and reliable data about current and past students.

The system will help the college to manage all its processes ranging from student registration, exam timetables, class registers, payments, student attendance, exam results, and announcements and generating of reports. This system is developed to ensure smooth operation of the administrative management of the college, students, parents and members of staff. Additionally, the system is created to solve the problems incurred due absence of the desired system because of its efficiency and effective to prevent errors and loss of student files.

According to Haang S (2012), ICT is becoming increasingly used in colleges and other educational institutions, and established in professional and classroom practice. Eludire (2011) also noted that the data generated by organizations are usually created in files for use by different departments/units within the organization. Visscher A et al (2009) noted that organizing and managing student records into a cohesive and efficient system might seem like an impossible task. However, this study was carried out to verify the manual process involved in colleges and to seek a way of automating the system for effective operations. Hence, the need to involve a computerized process

that will effectively and efficiently capture all the important data associated with the pupil registration, time tables, pupil attendance, payments, subjects, classrooms and announcements processing within the School.

Following the advanced information management system (AIMS) project conducted Saina T (2017), she argued that design and implementation of a comprehensive student information management system is to replace the current systems being used in some Colleges and Universities. The Malcom Moffat College of Education is still using a semi-automated system and paper-based student information management system. These systems, according to Rifel (1997) do not fully automate the process of storing student information, capturing student payments and entering end of semester examination results. The staff at the college have to manually perform these processes for each student. The staff finds it very tedious and laborious in performing these tasks due to repetition of the processes

However, with all this increase in technology, there is need to develop and adopt new systems in colleges, systems that integrates interrelated modules and manage the administration of school efficiently. According to Bellum J.M (2003), we are living in an information age where many technologic developments have been experienced and the biggest risk that an organization can take is to stay insensitive to change. Computer applications are increasing being developed every day in order to help in streamlining education-related processes to promote solidarity among students, lecturers, parents and the administrative staff.

Therefore, in order to effectively and efficiently handle these actions one of the major tools is to have advanced college management system. Ukemu (2012), automation is the utilization of technology to replace human with a machine that can perform more quickly and more continuously. And according to the project study conducted by Petrovik (2016), a school management system is a large database system which can be used for

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managing school's daily work. In addition, Telem (1999) defined school management system as a management information system designed to match the structure, management task, instructional processes and special needs of the college.

The advanced college management system is used to record student information, attendance, exam results, capture student payments, time tables, classrooms, courses, events/announcements and managing college and farm resources. However, this system consists of web-based application. This means that the system can be accessed 24/7 on any device provided there is internet connection. The system has the facilities capable of generating various types of reports, which are required by the management during normal business operations to operate the business efficiently and effectively. Such as producing daily reports, preparing timetables and printing of transcripts.

Furthermore, this system aims at eliminating the current manual system of doing things; the college operate manually starting from student registration, class registers, exam timetables and generation of reports. Nevertheless, the manual system requires more administrative work and consumes more time due to repetition of processes. Odedra M (2005) says that Information and Communication Technology (ICT) is widely believed to be important to introduce and sustain education reform efforts. Therefore, with this technological advancement there is need to change the way of operations by developing advanced IT driven system at the college.

Most importantly, this research project aims at providing means to effectively and efficiently management of Malcolm Moffat college administration and processes for excellent academic, production and quality teacher training services. This parallels the study of Qiu Chang Liz et al (2012) which also deals with alternative ways of implementing information and communication technology (ICT) in cutting down on time consumption, inefficient use of student data,

manual mistakes and duplication done by both academic personnel and staff. This system also ensures security of college records or information, enhance efficient inquiring and query, and assist the college to cope with the daily activities. Not only that Geeta R et al (2013), explained that such system increases accessibility and availability of real-time up to date information and cuts down the college management costs such as buying of stationery and office cabinets. The system makes it possible to access and retrieve the required information and activities instantly from a single automated resource.

1.4 Scope of the study

The project for Advanced College Management System is designed for Malcolm Moffat College of Education but can be used by any college in Zambia. It is focused on every day running of college management; including such facilities as student's enrolments, attendance, payments, accommodation, exam timetables, semester examination results, notices and announcements. The system is designed to help the college administration and management in making workable decisions and strengthen the already existing position as a model college in Zambia.

It is more efficient and convenient for the college. As pointed out by Josep Cobrasi (2015) web-based applications reduces the manpower and costs associated with the running of the management. If much the work is done on a computer there will be no Chance of errors: Moreover, storing and retrieving the information is easy, so work done can be easily done in lesser time. College management system will use centralized databases for all departments reducing the redundancy

2.1 Literature review

Around the globe, education has become of the utmost importance. Christopher (2003) point out that various institutions of education have gained popularity resulting in a very high number of student admissions every year. Due to the growing demand in the number of places, various colleges have been built which facilitate these needs. Every

year millions of students take admission for education all over the globe. But the management of admission to these colleges is of great concern. Due to the very high number of students enrolling every academic year, the work at college level increases exponentially. In most cases all the work has to be done manually while some colleges use the system which is very expensive and not customizable. In the case of a manual system, it takes a lot of time and manpower while the existing systems impact the finances of the college as they are SaaS-based and mostly charge per student. There is also a need for registration and form filling which is also done manually. Also, Jain (2004), added that there is a need for a system which can be installed locally in these institutes and which would automate the tedious process of manual admission. So, this research was aimed at exploring various possibilities where one does not have to use the manual system or any expensive system to efficiently manage the students' data and information.

Two most popular researches that has been conducted and documented on college management are, "A Research Paper on College Management System" the author Mohan L Josh (2010) came up with a structure for the system where the process of entering the information and viewing the information is elaborated. However, it had its shortfalls, as the system did not allow integration of the admission process or exam process that should be integrated for next level of automation.

In the other research paper by Josep Cobras (2015) entitled "Campus Information Systems for Colleges", the author had researched on a system that will help college institutes integrate management system with a social module, which is not a requirement for all the institutes. It also integrates a Housing module which helps enables the institutes to manage the data for the hostels and other facilities.

This is illustrated in the table below

AUTHOR	METHOD AND DESCRIPTION	ADVANTAGES	DISADVANTAGES
Lalit Mohan Joshi "A research paper on college management system."	To provide a login system for the admins to update the information and the students to view the marks, exams, schedules etc.	The software is very robust. Can be adapted in any small-scale educational institute because it is very cheap and relatively faster.	It does not have an integrated system for admissions which is needed mainly for high volume admission process.
Josep Cobrasí "Campus Information Systems for Colleges"	The system was designed for implementation on large campuses with integrated housing for students. It provides major modules like Academics, Social and Administrative	It gave a full proof method for large campuses and provided an easy academic as well as housing management system	This system can be very expensive to implement as it requires multiple nodes and servers to be implemented

TABLE 1.1: COMPARATIVE ANALYSIS OF LITERATURE (Mohan L Josh 2010)

Globally a lot has been done on the management of information in large institutions. According to Zhibing Liu (2010), he stated that the major factors of developments in information technologies, information exchange, increasing expectations of the society, modern managing perceptions and applications results the organizations all over the world to develop new applications for them to survive. Therefore, modern societies, have adopted the information technology in education sector as a priority. It is now the aim of every country to

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provide its citizens with the more reliable education in line with their financial capability. Ngoma (2009) argued that for this reason, big investment plans about the use of information systems have been put into actions all over the world.

Qiu Chang Liz (2012) developed Student Information Management System. The system was able to allow the administrator to edit and find out the personal details of a student and allows the student to keep up to date their profiles. It also facilitated the keeping of all the records of students, such as id, name, phone number and date of birth. Therefore, all the information about student was available in a few seconds. Prof. Ukemu (2012) in his research paper title "enhanced model of student information management system", He determined that the system should provide an online interface for students, expand the effectiveness of college record administration and reduce the time needed to access and convey student's records. Geeta R (2013) designed Student Academic Management System (SAMS) developed mainly for school to ensure all academic process or management is in order and organized. This system was developed to facilitate the administrative management and arrange of laying out all the administration and management students. The system was created to solve the problem and give a standard academic process for the student of the school. He further observed that many problems occur due to no system to manage the student process such as attendance, student profile record, result and so on. Gurr D (2005), further argued that a college system helps and provides efficient and reliable services to the students, teachers and parents. Moreover, this system enhanced the process of data capturing in terms of searching, updating and retrieving of records. While in a study conducted by Ngoma S (2009), many problems and difficulties were identified in the existing system of Dagupan City National High School (DCNHS). These major concerns were affecting the efficiency of management system of students. However, security of the student's records was found to be at high risk.

This clearly shows that the system failed to protect certain important documents. Additionally, to that, this system was also found to be inefficient and untimely report generation. However, the computerized system for DCNHS shows the result to a significant increase in the number of students.

Jain K (2004) in his study entitled "Network-bases Enrollment System cited that the manual process of enrollment and manual handling of information and reports of the students is very laborious one. Eludire (2011) created the similar system, the study enhanced a great help to persons concerned during the enrollment period, the registrar, instructor of the students as they retrieved necessary information when needed and lessened the burden of manually browsing over enrollment slip for record purposes. Ukemu et.al (2012) developed the system "Network based automated enrollment and grading system. Due to increasing population of the institution, and the institution was implementing the manual system, every student spends a lot of time during enrollment period, such as paying their tuition fees and processing the requirements. Ezenma A et al (2014), in his work entitled "Network-based student permanent record keeping and enrollment System argued that the system was made to lessen the time and effort exerted by both student and employees. It was also made to give accurate reports and keep records of every student and for easy and fast way of enrollment.

Christopher et al. (2003) developed the 'computerized Students Record Monitoring System of Siniloan national college", Computerized Student data which exceedingly helped to the user through continuous management of the college. It could help the registrar for a less effort services in the institutions especially in updating, printing and deleting student's record.

In Africa however, college management was first coined by Anigbogu Set al. (2000) who observed that many higher institutions in Nigeria still adopt the manual method of managing students' data which is time consuming and demanding, and are often prone to a variety of errors and disasters. He

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further determined that it brings to the fore the need to properly address how these shortcomings could be resolved and improved. They further stated that the solution to these shortcomings lies in an efficient information management system, or simply, information system. Ezenma A et al. (2014) from the same country further stated that, with the use of computers for information processing, the following are possible: instant access to students' profiles and grade information, instant student information updating, automatic computation of the Grade Point Average (GPA), generation of the students reports, monitoring of student performance, keeping an up-to-date record of the entire student body in the school, storing academic information such as payments and producing user friendly data entry screens for ease of use.

Africa seems to be the "lost continent" of the information technologies (IT). The second largest continent is the least computerized, and it's more than two score countries have an average telephone density that is an order of magnitude smaller than that of the European Community. A recent graphic on world computer densities used the map of Africa simply as a place to display the overflow data for Europe.

"International Perspectives" brings three Africans together -- notably through the use of the electronic networks -- to discuss a few of the issues and problems confronting the effective use of IT in sub-Saharan Africa. We start with Mayuri Odedra's provocative perspective. A Kenyan who has written extensively on IT in Africa, Odedra helped launch and edit the journal "PC World Africa" before her recent move to the National University in Singapore. Her statement is followed by responses from Mike Lawrie, director of computing at Rhodes University in Grahamstown, on the southern coast of South Africa, and Mark Bennett, director of computing at the University of Zambia in Lusaka.

In our country Zambia, engineering field has become of the utmost importance in the last decade. Various branches of Engineering have gained popularity resulting in a very high number of student admissions every year. Due to the growing demand in the number of seats various colleges have been built which facilitate these needs among them information and communications university (ICU) Zambia, Mulungushi university and Zambia information Communication Technology (ZICT) college. Every year millions of students take admission for Engineering all over Zambia. The ministry of higher Education in our country takes care of the admission process for engineering. But the management of admission at the college level is important all the same. Although the MOE provides a Centralized Admission Process, for students to be actually admitted to the college, there has to be a long procedure to be followed physically at the college. Due to the very high number of students enrolling every academic year, the work at college level increases exponentially. All this work has to be done manually. Most of the colleges do all this work manually while some colleges use the system which is very expensive and not customizable. In the case of a manual system, it takes a lot of time and manpower while the existing systems impact the finances of the college as they are SaaS-based and mostly charge per student. There is also a need for registration and form filling which is also done manually to be automated. There is a need for a system which can be installed locally in the institute and which would automate the tedious process of manual admission. So, we will be exploring various possibilities where one does not have to use the manual system or any expensive system of efficiently manage the students' data and information.

Different researches in different countries confirm that college management information systems increase organizational and managerial effectiveness. Hedberg, Harper, Bloch and College (1992) conducted the studies done with American college principals and stated that efficiency has increased in decision making at schools where college management information systems were used. Gurr (2000) in his study examined effects of management information systems on working of

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college managers in Australia, however, managers stated that use of management information systems had introduced them information technologies and the facilities, lessened their workload and made management process more efficient. It also helped them use time more efficiently; teachers felt themselves more important and wished to improve themselves.

In their study Telem and Buvitski (1995) with college managers discovered that the managers believed that advanced management information systems lead to important changes at their work place. And according to them, the application had increased standards, helped decisions on the level of control and strategy and increased the quality of teaching programs, increased the coordination between teachers, facilitated systematic, facilitated student-teacher interaction, continuous information transfer to parents, and increased communication with other institutions and the central organization. Gurr (2000) in his study examined effects of information systems on managers of colleges; he determined that information systems have largely changed roles of these principals in colleges.

Haang (2004) also found that communication and information sharing among stakeholders provides for more effective decisions. Advanced management systems can also inform educators about their students' non-cognitive skills, relating to grit, motivation, self-efficacy, and resilience. These soft skills may not unequivocally relate to academic proficiency or grades but are still critical to students' overall performance. As education software corporations generate new analytical strategies and as the big data era surges, the value of advanced systems will be more impactful for educational decision-making. This concept was evident in the Tacoma, Washington public district institution that integrated predictive analysis with the data from advanced management system to build intermediation strategies that boosted its high student graduation rate by 27.6 percent to 82.6 percent, over six years (Tacoma, 2016).

From the research conducted, it is clear that there are multiple benefits in using the advanced or automated system of information management in any given institution. These include; having quick and easy access to the record, the ability to evaluate, distribute, and utilize data in every aspect of their decision-making, learning from new information, and expand and disseminate effective strategies, through the community of practice. Efficiency focuses on the application of big data to analyze the correlation between educators and administrators practices and student and college performance.

Not only that easy decision making, are reduced workload, effective use of time, communication with parents all advantages over electronic and manual systems.

As said by Dunn and Scott (2005), science and technology are the root of emerging innovations in this world. For many years now, a person in this field of expertise does not stop to reshape the landscape of today's business world. Advanced management system has made huge impact into the education arena. It is a system that is built on innovative program strategies. It is a system that will help both the college administrators and the students to easily process the daily activities at a lesser time.

Distinct from the manual systems, advanced college management system process large assortment of student records and provides efficient and consistent information services. As stated by Holmes (2006), "The Internet is neither an extraordinary communication tool nor revolutionary. It simply represents the current stage in the development of human capabilities through written language, which itself derived from the spoken form." That statement only shows that advancement in modern technology is at their highest peak. According to Rifel (2007), continuing innovation in technologies can lead to organizational changes that range from improvement of day to day operation and for easy access it provides for the end users.

The researcher's view is in line with Bellum J.M (2003), definition of the automation who described it simply as the substitution of machine control of human. Barret (1999) stated that computer assist careful intelligent planning, organizing, actuating and controlling. Liu Z (2010) stated that the reason for using computers vary from person to person. Some of the computers in business are to perform accuracy, to be as productivity, to decrease bottle necks or hassles to alter cash flows or to simplify elevate your status. Gold Christopher et al (2003) said that computer as a device for processing information knew computer plays a significant role in their lives, but few are aware of just how pervasive role is.

The researcher agrees with Ngoma (2009) view who mentioned that the creation of the computer made it easier to accomplish task than by doing it manually, to have the direct access on straightforward answer just monitoring record where in the needs of computer make possible for everyone to get data in a particular need. We can consider that the computer is necessary and it is a productive tool for individual. Geeta R (2013) stated that the database system makes the work faster for every institution. For the mere fact that instead of doing things manually, with the use of computer technology everything is done faster. Christopher (2003) school managers can make more efficient decisions when they get correct and up-to-date information by SMSs. Decision making in any school set up is the key to educational development and management.

However, the motivation for the design of CAMS were from the two most popular researches that has been conducted and documented on college management. The first was "A Research Paper on College Management System" the author Lalit Mohan Joshi (2015) who came up with a structure for the system of a college where the process of entering the information and viewing the information was elaborated. However, it had its shortfalls, as the system did not allow integration of the admission process or exam process that should be integrated for next level of automation.

In the other research paper entitled "Campus Information Systems for Colleges" by Josep Cobrasí (2010). In this paper also, the author had researched on a system that will help college institutes integrate management system with a social module, which is not a requirement for all the institutes. It also integrates a Housing module which helps enables the institutes to manage the data for the hostel.

Additionally, Temba Saina (2017) developed an advanced information management system at information and communication university (ICU) Zambia. The system is able to record management and transaction processing student information, capture student payments, allocate semester study materials to students, enter end of semester examination results. This system gives great help to the administrative personnel, academic personnel, accounts personnel, examinations personnel and students in updating, retrieving and generating student data. The system stores its records in the school database for future references. Confirmation of the transaction made by the students need to be verified, the payment of tuition fees must be made online. The students may also browse the web site of ICU and can check current announcements, courses, results and payment history. There are other systems being designed for reliable, efficient and very useful to the user.

3.1 Research Methodology

Emmanuel B (2012), defined Software Development Life Cycle (SDLC) as a process used by the software industry to design, develop and test high quality software. The SDLC aims to produce a high-quality software that meets or exceeds customer expectations, reaches completion within times and cost estimates. Software Development Process Models". Each process model follows a Series of steps unique to its type to ensure success

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in the process of software development. Examples of such models include; Waterfall Model, Iterative Model, Spiral Model, V-Model, Big Bang Model, Agile Model, Rapid Application Development and Prototyping Models. This chapter briefly explains the selected model for the design of CAMS, the procedures or the steps followed in developing the system through the systematic collection, analysis and interpretation of available data.

3.2 Data Collection

There were two main approaches of data collection that were employed in the project. The primary sources included structured interviews and observations conducted to college administrators, lecturers, student teachers, auxiliary staff and other key stakeholders. Secondary data was also collected from authentic text books and journals.

3.3 Research Approach

From the various models by Jain K. (2004) of software development life cycle, RAD (Rapid Application Development) model was selected to be the most suitable in the development of College Advanced Management System (CAMS).

Following the pattern done by Josep Cobrasi (2010), there were a number of factors that led to selection of RAD as the most appropriate model. Rapid Application Development focuses on gathering customer requirements through workshops or focus groups, early testing of the prototypes by the customer using iterative concept, reuse of the existing prototypes (components), continuous integration and rapid delivery. Rapid application development is a software development methodology that uses minimal planning in favor of rapid prototyping.

Many researchers including Lalit Mohan et al (2015) have argued that the traditional SDLC models follows a rigid process with high emphasis on requirement analysis and information gathering before the coding starts. These models put pressure on the intended user to sign off the requirements

before the project starts and the user doesn't get the feel of the product as there is no working build available for a long time. However, the use of RAD helped the researcher to provide the intended user with the feel of each protype product of the software which made easier and motivating for them to release requirement analysis for the next modular.

There were notable changes by the user after seeing each modular of the software. Since RAD promotes iterative and agile development techniques, it was easy to embrace and incorporate those changes during development of each module before a prototype can be circulated. Tacoma (2016) clearly explained that the RAD model focuses on iterative and incremental delivery of working models to the user. This resulted in rapid delivery to the user and user involvement during the complete development cycle of the product reducing the risk of non-conformance with the actual user requirements. RAD model is applied successfully to the projects like advanced college management system in which clear modularization is possible. The system was designed to accommodate key departments and operations which were considered to be modules. Among them student enrolment module, college payments module, lecturer module, courses module, time tables, classes, events and notices, results, attendance, fees structure, sessions, exams and a module for parents/ guardians. The other factor that accounted for the selection of RAD (SDLC) model was the presence of system intended users (managers, lecturers and students) with relevant knowledge pertaining to the functioning of the college.

3.4 System Investigation

The researcher did an in-depth and comprehensive study on an existing system in colleges in order to arrive at vital and relevant facts that prompted in the design and development of the advanced college management system (CAMS). Considering the study of Emmanuel B (2012), the main objective of

system investigation was to find out how the current systems operates so as to come out with relevant data. The case organization was properly studied based upon their operational mode. Books and records kept and approaches to decision. It involved the presentation and analysis of data based on the system for Malcolm Moffat college of education.

The researcher also took time in studies of the academic operation of the college which is the manual system and partial electronic systems. All the processes were also studied. Data was collected from the lecturers, parents, students and administrators which formed the basis for the data analysis.

3.5 Result of Analysis and Interpretation

From the data collected, the following results were made:

(a) It was discovered that through the use of the manual system a lot of academic information go missing, damaged, and difficult in accessing data, existence of errors and unreadable hand writings.

(b) The college is making use of the manual approach, they do not have a database system that keep academic records; such as student details, time tables, payments, announcements and attendance. They use papers and file the work in physical cabinets for storage. Exam time tables and notices are stack on the notice board where everyone has to go and see the latest updates which is located in the middle of lecturer's offices and it is usually inaccessible to students' because it is usually locked on weekends.

(c) It was also observed that the college administration, lecturers and students who knew about the new system welcomed the anticipated benefits derivable from the new system which can handle all college activities such as capturing/recording student's details, preparing and viewing of time tables, payments and announcements.

The system can easily be accessed, provides efficient storage and enables easy retrieval of information. It removes or reduces the errors that exist from the manual system in use.

(d) Furthermore, during the investigation and data collection, it was discovered that the institution is not all that aware of the new system that is "advanced college Management System" this can be explained due to the numbers of the system and the technical involvement of it.

3.6 System Analysis and design

The investigation made from the existing system which shows that Malcolm Moffat College entirely uses manual system which is insecure and not efficient. Student information is lost with time and poorly organized due to lack of storage facilities and computerized systems. The college suffers communication problems, most of the times lecturers, students and parents are unaware of the current and incoming activities on time. Notices, exam time tables and results can only be seen on the notice board when one passes through which is not possible for everyone in this busy and business-oriented era especially for parents who do not reside in the premises of the college. This poses a great challenge as well as a lot of inconsistency. Decision making is ineffective and uniformed due to slow manual nature of processing of data, retrieval of data and overall control processes. The system is repetitive and laborious, thus affecting the measure resource of the institution.

This diagram represents the functionalities and scope of the web-based college management system project. It depicts all the entities involved and security features attached.
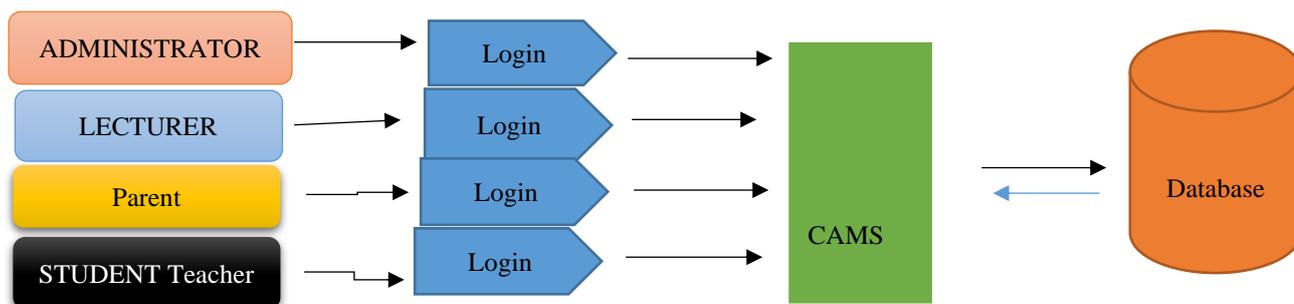
Fig 1.1 Context diagram.   Authors design (2019)

The users expected to use CAMS need to have the login credentials for them to access the system. The login credentials are given to them by the system admin when the account has been created for the class user. Since the system uses only one login interface in order to grant access to the different users of the system, it implies that the administrators, lecturers, student teachers and parents all use the same login form in order to access the system.

Figure below shows the flow chart and login page that is used for authenticating users that want to access the system.
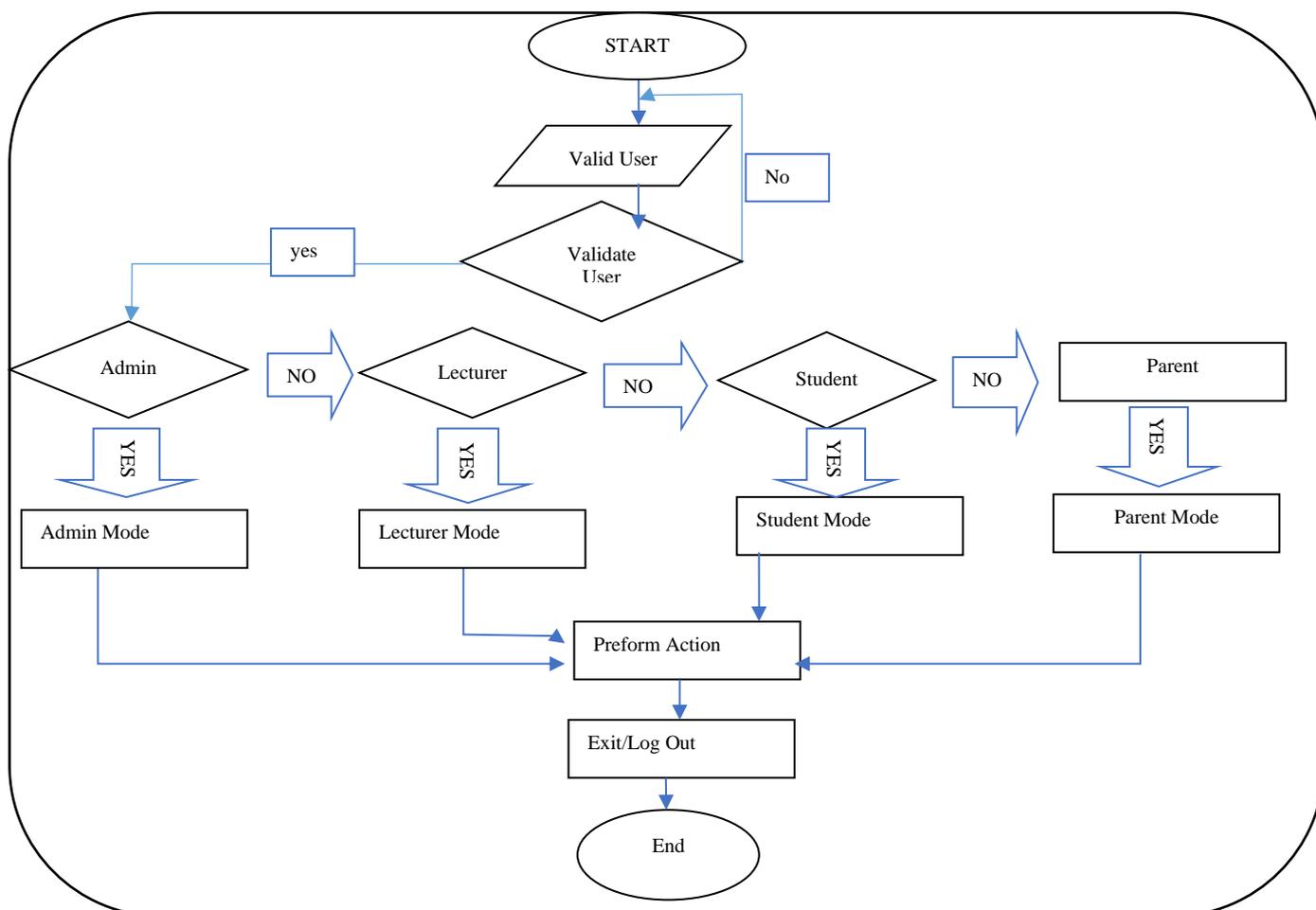
Figure 1.2: **Application flowchart:** Authors design (2019)
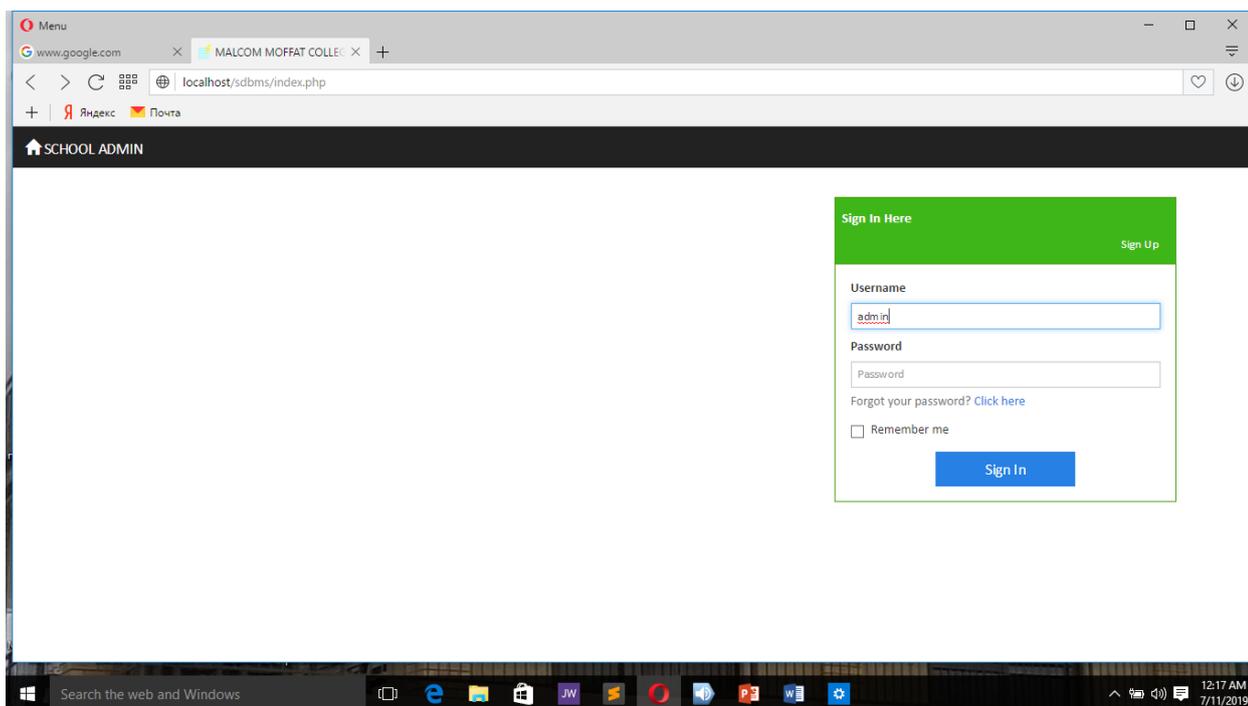
Figure 1.3: **Login page. Authors design (2019)**

The advanced college management system takes into account full user authentication mechanism to ensure that only authorized users are granted access to the system. The system enables a mechanism that makes sure that only users with authorized access are able to access the system and that they are only able to access part of the system that pertains to the kind of work they are authorized. The college administrators, management and lecturers, students and guardians/parents will only view parts of the system according to their kind of access they are given

Admin panel

System administrator for this system is responsible for managing the entire system by ensuring that all the modules of the system are working fine. The administrator has the rights to create new users and give them different access levels to the system. The admin can create, edit, delete and update modules. Additionally, the admin can do the following;

1. He or she has the power to create, update or delete any record of the system.
2. He or she is able to view the profile of all other users in the system.
3. The admin is able to see all the details whether it is related to staff, accommodation, attendance, payments or semester examination of students.
4. Assigning classes, sections, timetable to teachers and the pupils is done by the admin.
5. Monitor and verify payments made by students
6. Update student addresses and parents as need may arise, timetables and exam schedules
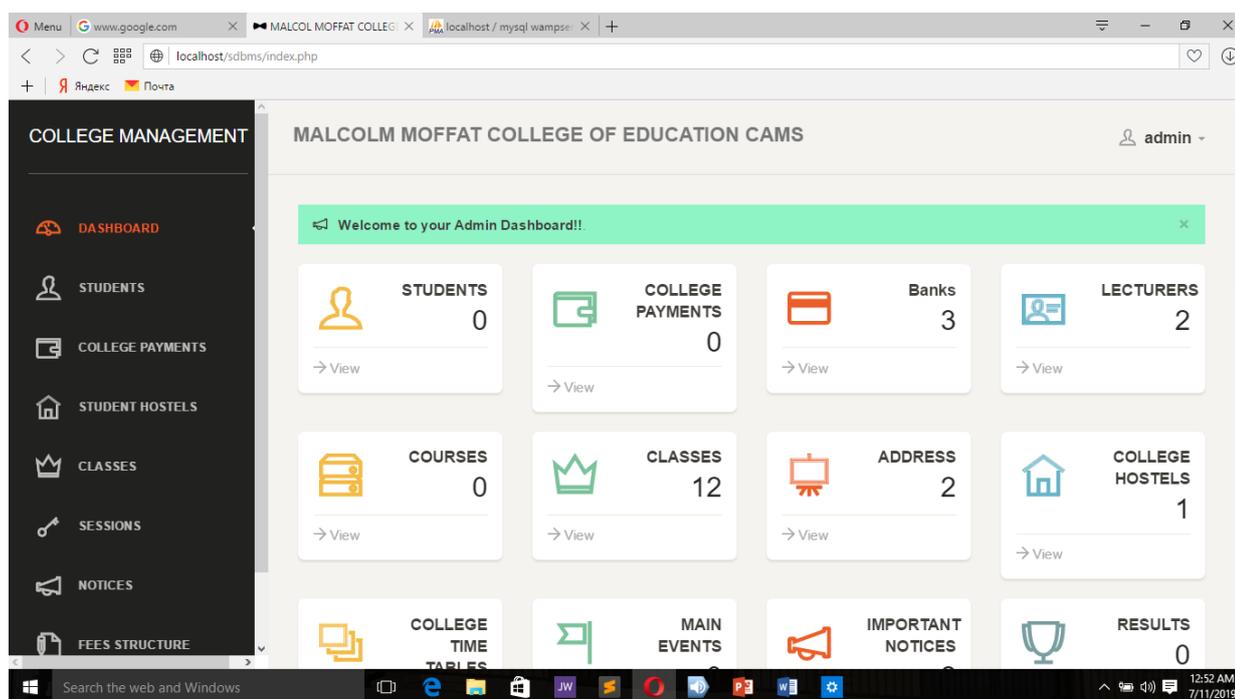
Figure 1.4: **Admin Dashboard. Authors design (2019)**
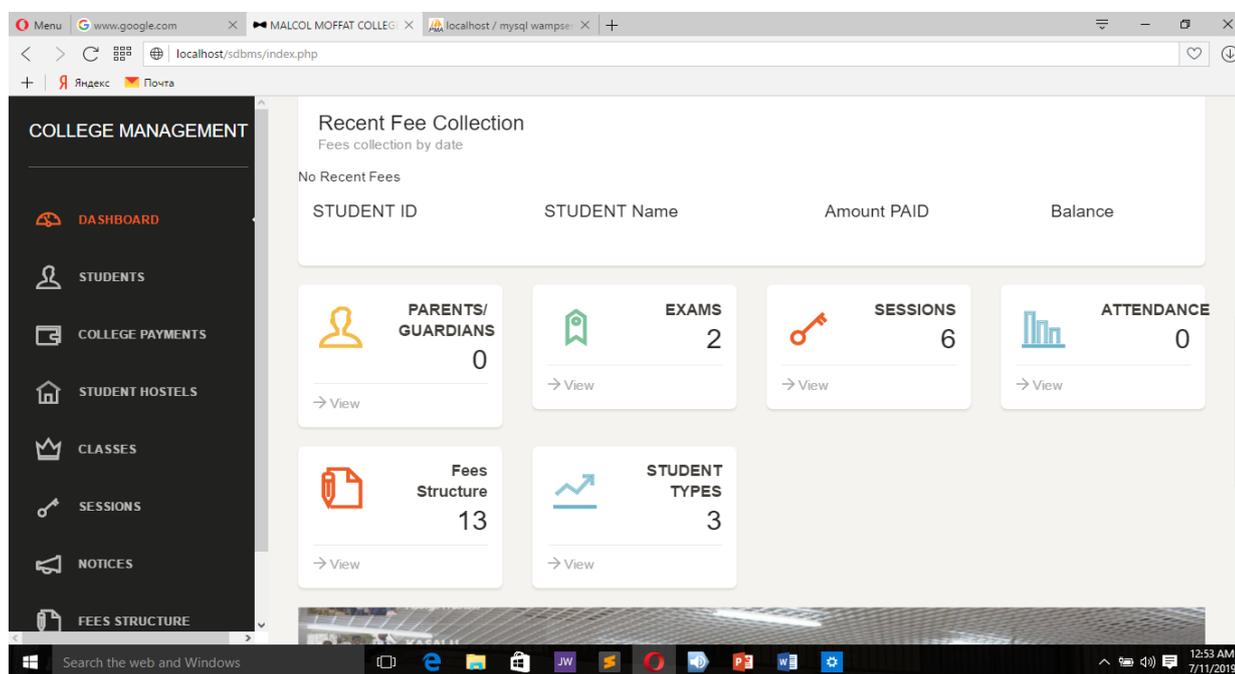
Figure 1.4: **Admin Dashboard. Authors design (2019)**

Lecturer Panel

The lecturer is key entity for the college. The system admin decides which rights to give which type of lecturer. He can allow him to view everything within his group or not.
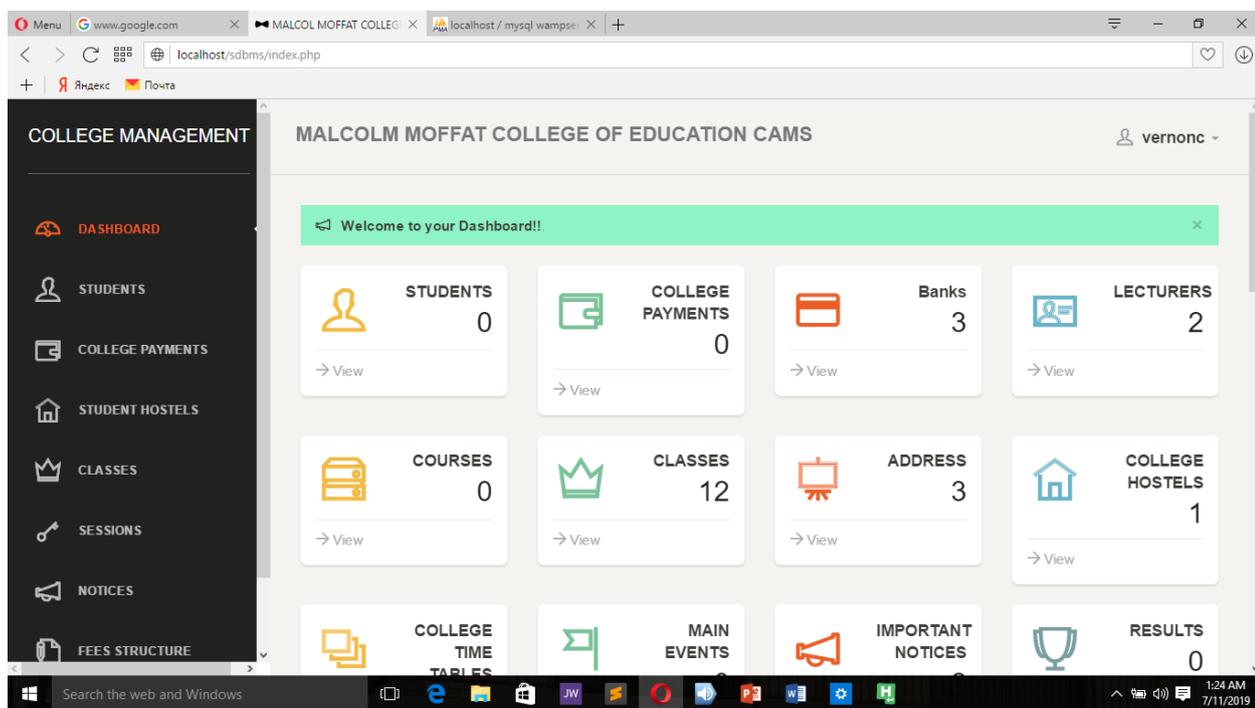
Figure 1.5: **Lecturers Dashboard. Authors design 2019**

He can also be given limited admin rights to add or delete some information depending on the key result area and the group to which he/she belongs. The interface for such level of rights are displayed below.
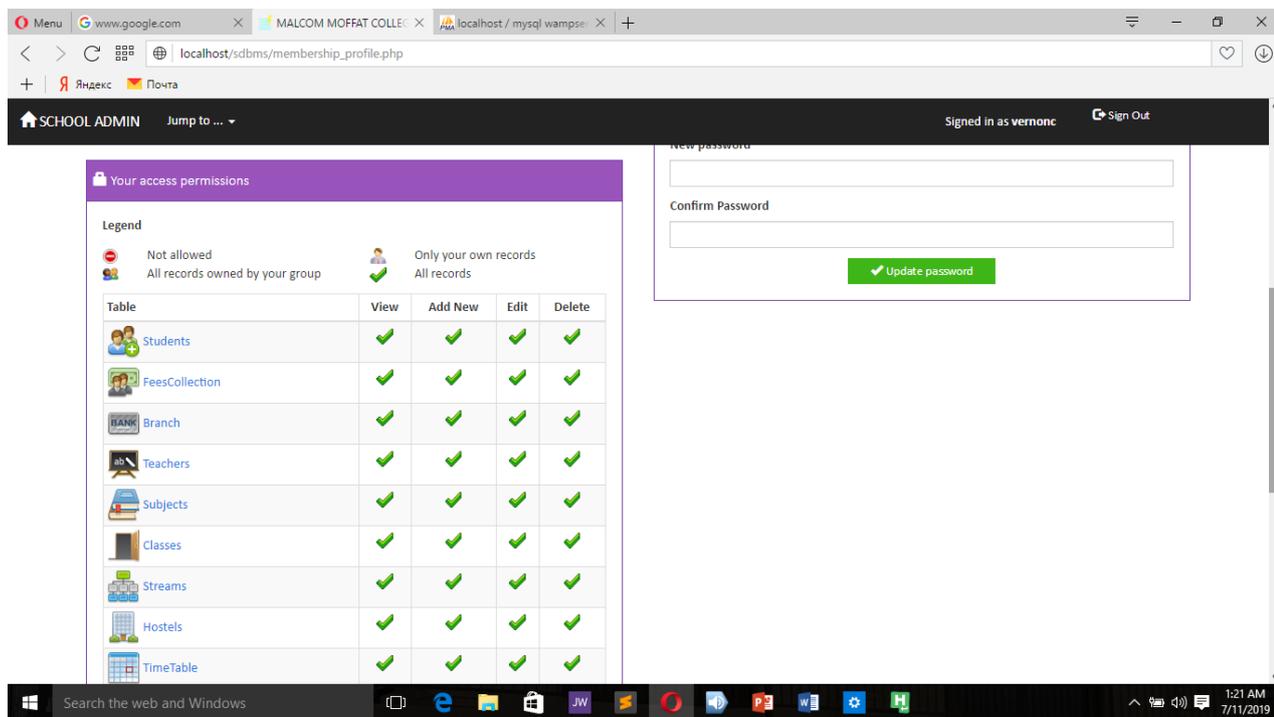
Fig. 1.6 Lecturers admin rights page: Authors design 2019

In this case demonstrated above, the lecturer logged in at the moment has been given rights to access all sessions within and outside the group.

Students & parents Dashboard
1. The student can login into the system at any time they want.
2. The student is able to view the school announcements
3. The student checks the balances owing the college and deadlines for payments.
4. The students have access to view the exam time tables and class time table.
5. The student can also access the schedule of the class he or she has to attend and some information such as class number, time of the class, which lecturer will take that class etc.
6. The student is able to view the examination results and progress exam results.
7. The student has access to view the class attendance register
8. A student can also identify which hostel has vacancies and can still search for friends in other hostels

All these are possible only with login details on the log in page shown below.
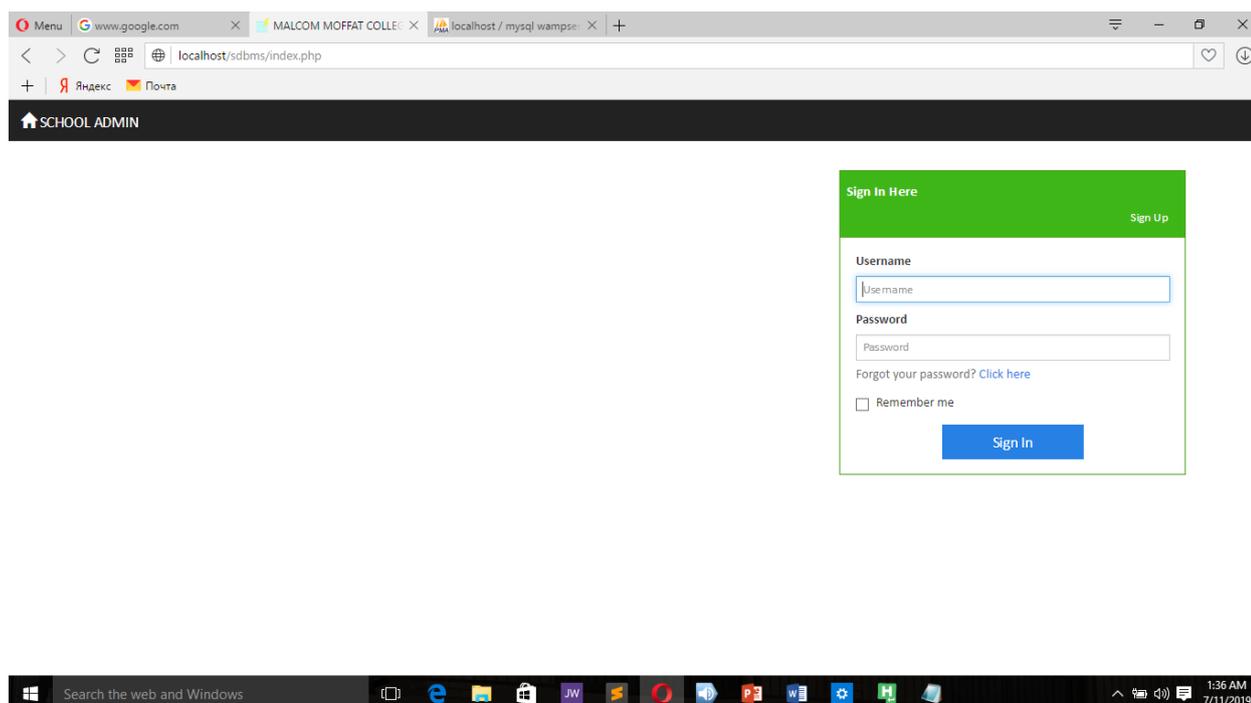
Figure 1.7: **Student Dashboard. Authors design 2019**

Parents Panel

The option for parents to login is to allow them to be familiar with the status of the students' performance. The parents are able monitor the daily activity of their child in the college. Additionally, parents are able to:

1. View students class attendance
2. Get students payment invoices or receipts
3. Get student marks
4. Get student class routine or timetable
5. Get or view the announcements/messages from lecturers.
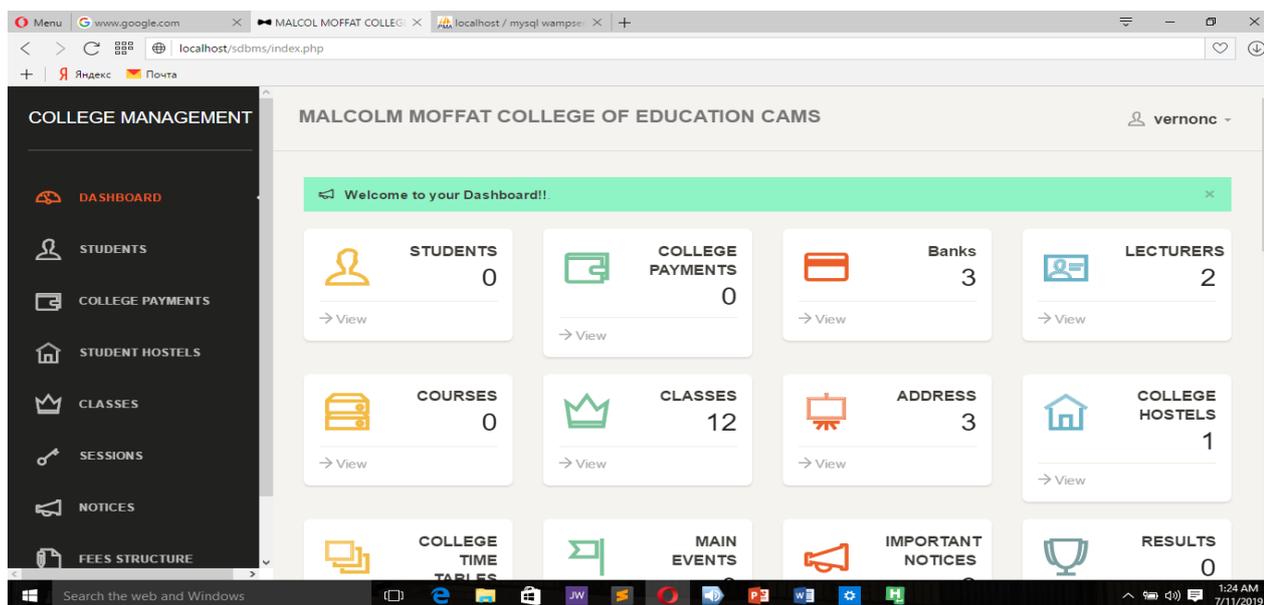
Figure 1.8: **Parents Dashboard. Authors design 2019**

The system has been designed and developed which can run on the server/computer with the network connectivity to the client systems. The database has been created using WampServer and web pages using PHP, the data is stored in database tables, users are able to key in data to tables through the forms which have been designed for this purpose, and these forms are the interface between users and the database. The forms run in web browsers, preferably internet explorer, Chrome or Mozilla Firefox.

4.1 RESULTS AND EVALUATION

To run the advanced college management system, one need to open the web browser of choice, then, type the path of the location where the application is located in the address bar in this case it is: local host/sdbms. When the page successfully opens, the user will be required to login depending on the type of a user. See the screenshots below for the front page.
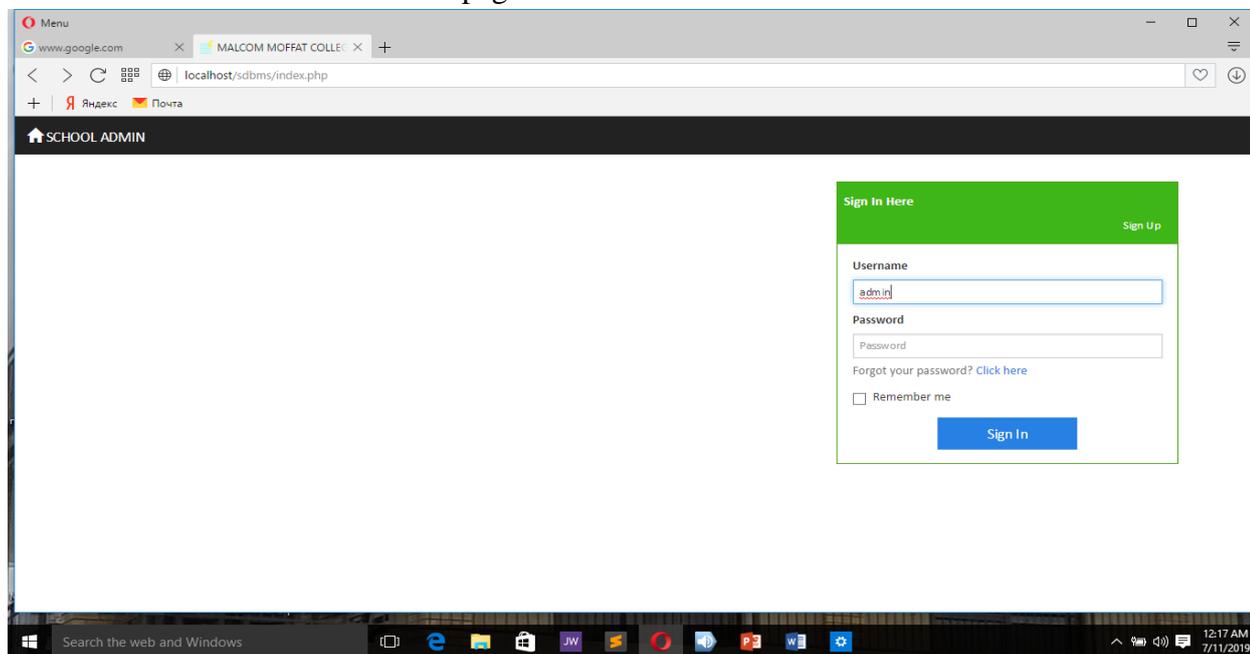

Figure 2.1: **front page/login. Authors design 2019**

The front page is a preface window at the beginning of advanced college management system. This is to notify the user that they need to provide username and password for them to access the entire SDBMS system. Once the user provides the correct credentials, the screen will open as shown
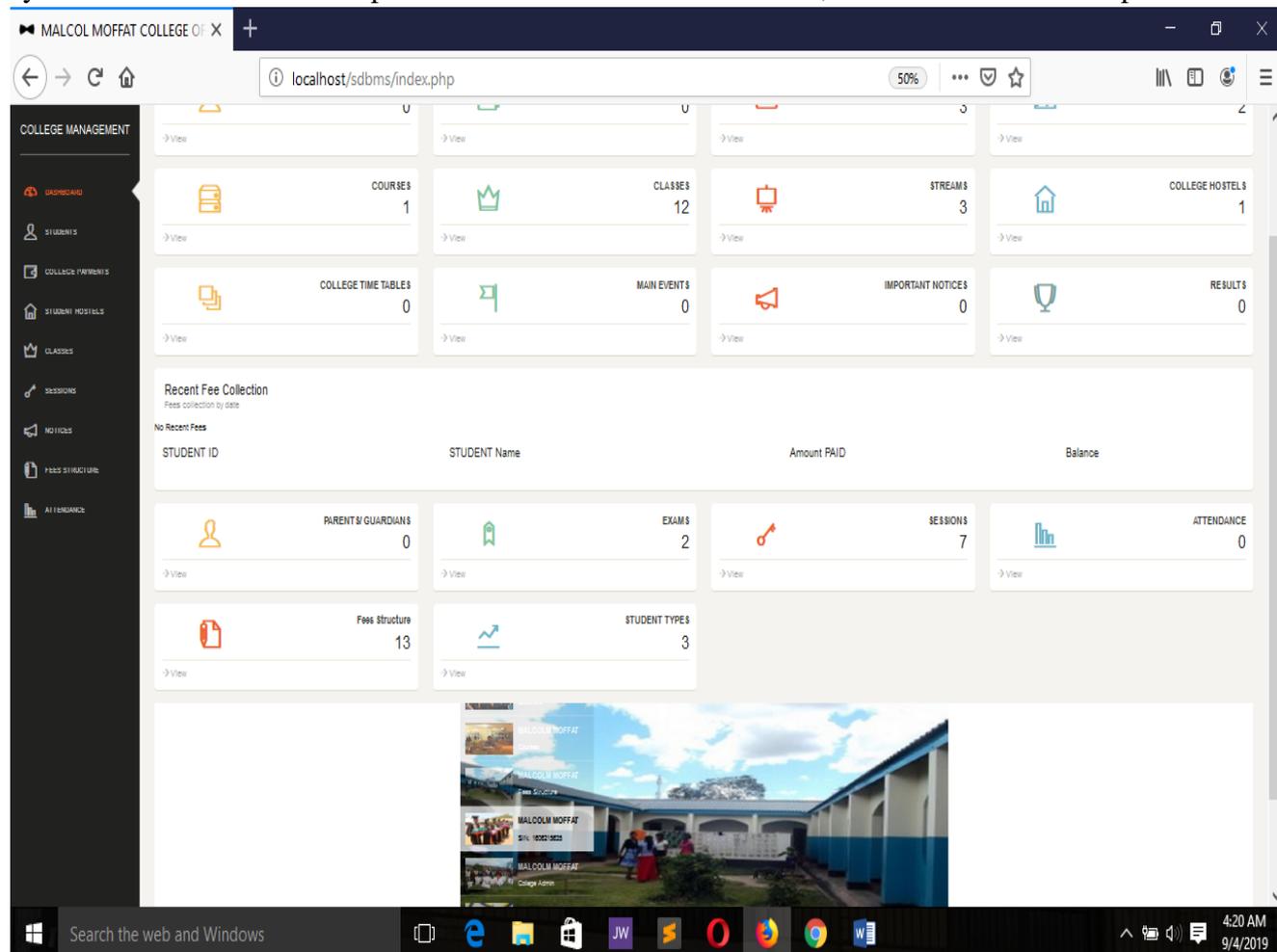

Figure 2.2: **welcome page. Authors design 2019**

 Project Modules

The system is made up different modules that are accessed by different users. The welcome screen has 18 modular sections and pictures for latest events and miles stone achievements like medals for the college are seen running at the bottom of the page. Each module has view option which the user can click to open and access the resource. The extent to which the user can modify, edit, add, or delete data in the system is entirely determined by the rights given by the system administrator. It is not automatic that any user can see the 18 modules contained in the system, the system administrator will determine which nodules will be relevant, necessary and ideal to be viewed by such users as lectures, student teachers and parents/ guardians. Any modification part can only be done by the administrator. The administrator has access to add user that is admins, groups and members lecturers, parents and students for more details see figure below.
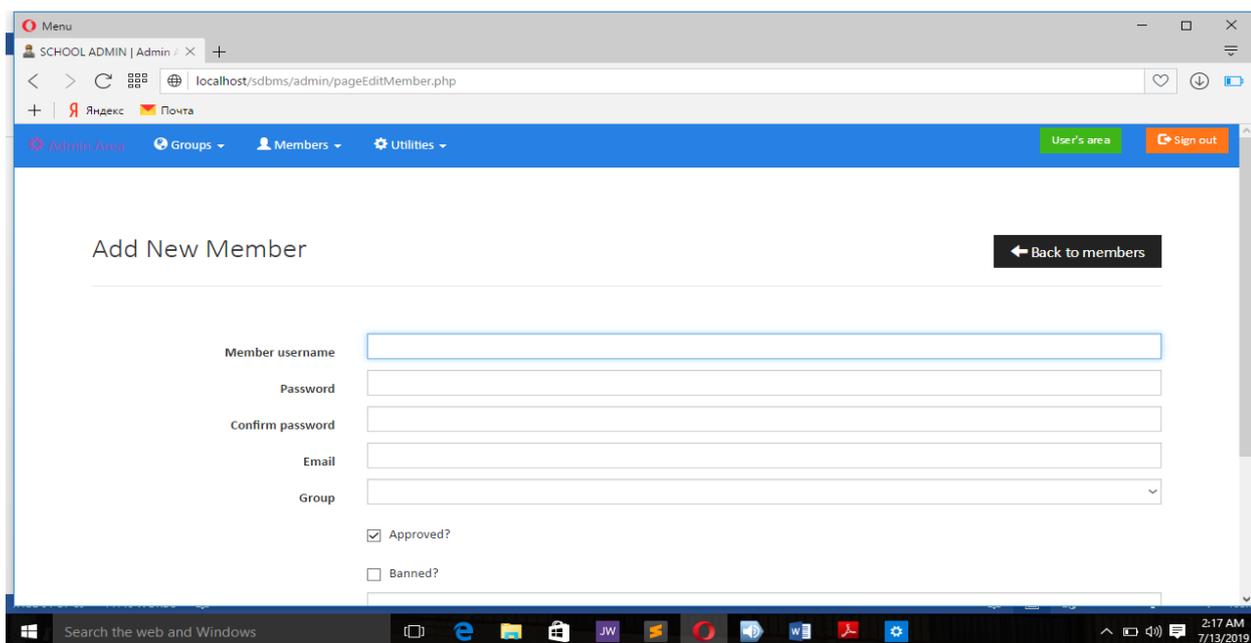
Figure 2.3: **Admin panel. Authors design 2019**

As shown on the screen shot above, the admin panel has three key entities i.e. groups, members and utilities. Under groups, the admin can view already created and existing groups, add a new group and edit anonymous permissions to be given to that particular group. These groups can be lecturers working in the same department for example languages department, accounts section, information and communications etc. these groups are given specific rights in the system depending on their level of operation and specification. Within the group the system administrator will decide which member will be the group admin so that he/ she is given rights to add data, update group information, add new members and approves other entries in the group.

At the bottom of the admin panel, statistical information is reflected showing summary of existing groups, newest updates, top members, newest entries, total groups, active members, banned members and those members awaiting approval to be included in the system.

Figures below show the forms for adding new admin, lecturer, parent, student and uploading bulk sheets.

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Figure 2.4: **Form for adding new Admin. Authors design 2019**

The system administrator can add an admin for a specific group. The name of the admin and secure login credentials will be entered once in the system and can only be updated or edited by the system admin for security purposes. There is a further provision of approving an admin by the system administrator who has the entire mandate to approve or ban the admin in case of transfer, dishonesty, or death. Depending on the case and situation the system administrator can decide to ban or delete such an admin. Further specific rights are endowed upon the admin on who to allow or deny access to the group information.

Figure 2.5: **Form for adding new lecturer**

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This form can be used by either the system administrator or the group admin. It is used to enter details and login credentials for the new lecturer into the system. Information regarding the user name that the system will use to identify and authorize that member to access the system, the password and the email address for verification purposes. Also, a comment box will give further relevant information about that particular lecturer which must be known regarding the use of the system. The information and login credentials will be seen by admins with access rights on the page for groups. However, the new lecturer can change and update these details with time but should be approved by the system administrator.

Figure 2.6: **Form for adding new Parent. Authors design 2019**

The same procedure applied for the addition of lecturers is used for parents with exception of admin rights. Parents are allowed only to view certain modules of the system that is relevant to them such as attendance, results, events, notices, sessions, hostels, classes and payment. They can also send a message, receive messages and comment on the notices and events

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Figure 2.7: **Form for adding new group. Authors design 2019**

Each group created has a key specific function in the college and hence the need to manage its data in the college system**.** However, there is no limit to the number of groups that can be created in the system except consideration of what is really needed, active and important in the management of the college and suggested by the users and college management.
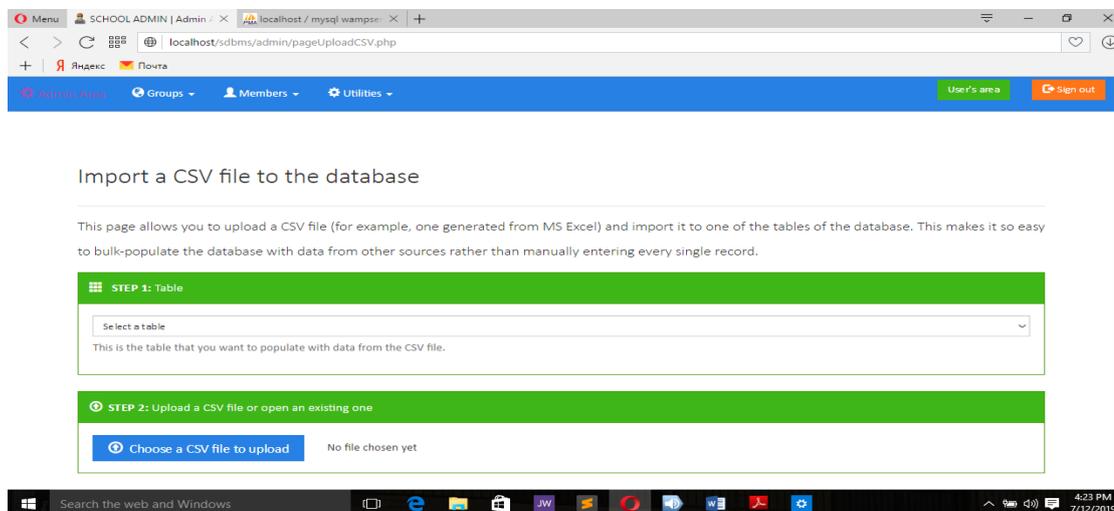
Figure 2.8: **Form for Bulk Upload. Authors design 2019**

This form is mainly used by group admins and system administrators to upload bulky information that is already generated on other electronic media for example results on a spread sheet, student's enrolments, payments details, bank sheets, purchases etc.
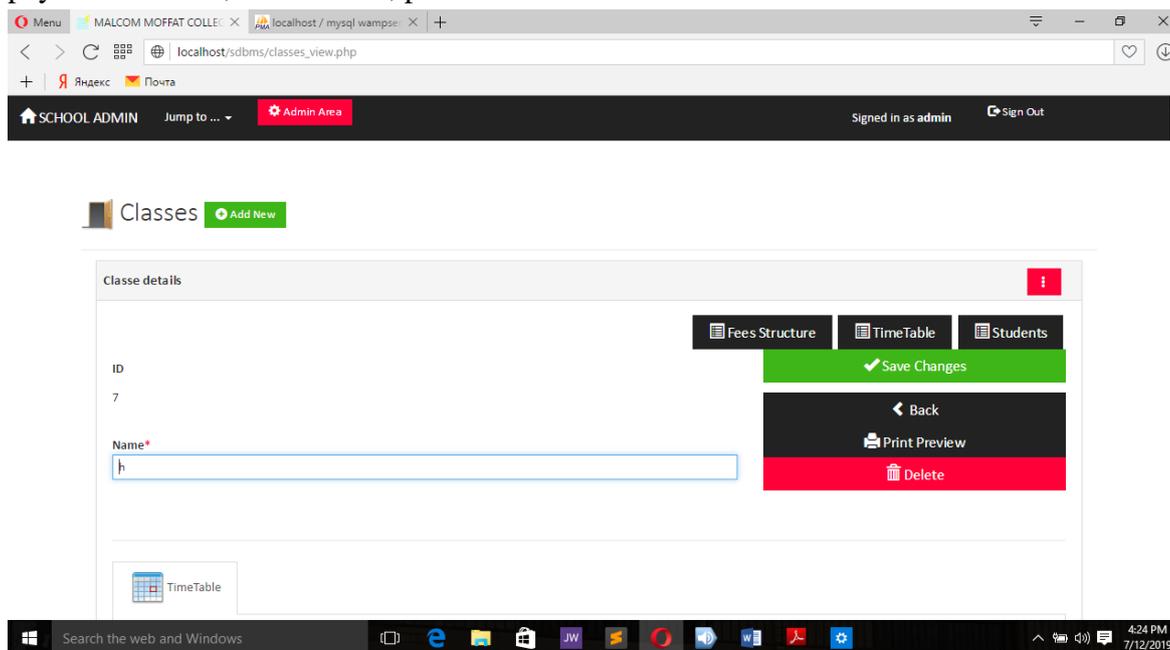
Figure 4.9: **Manage Classes. Authors design 2019**

Since each class has a specific fee structure, the student details and class will automatically generate payment standing whether the student has cleared or has outstanding balances
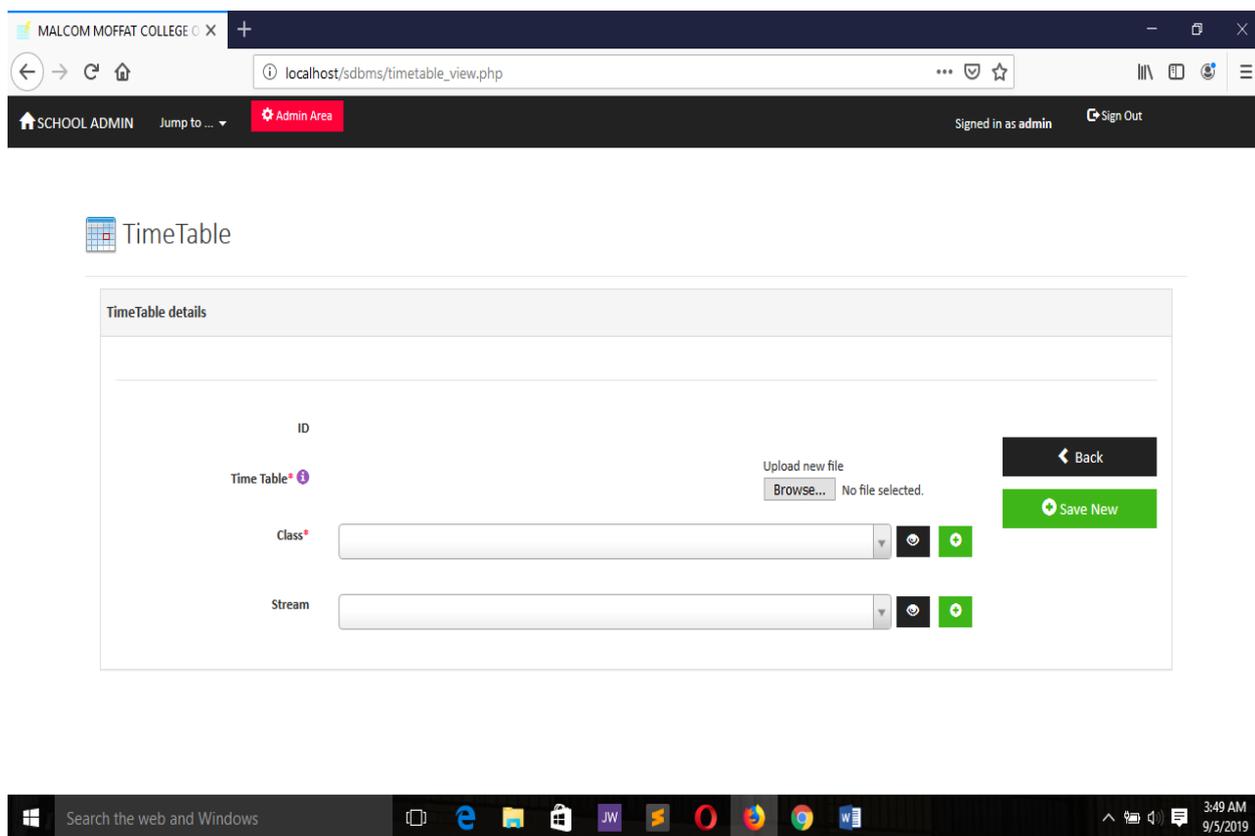
Figure 2.10: **Time tables. Authors design 2019**

Each class and stream will have a timetable fed into the system to avoid clashes. The student or lecturer can easily browse with the browse key using the authorized id to find out which class he or she is supposed to attend at a given time.
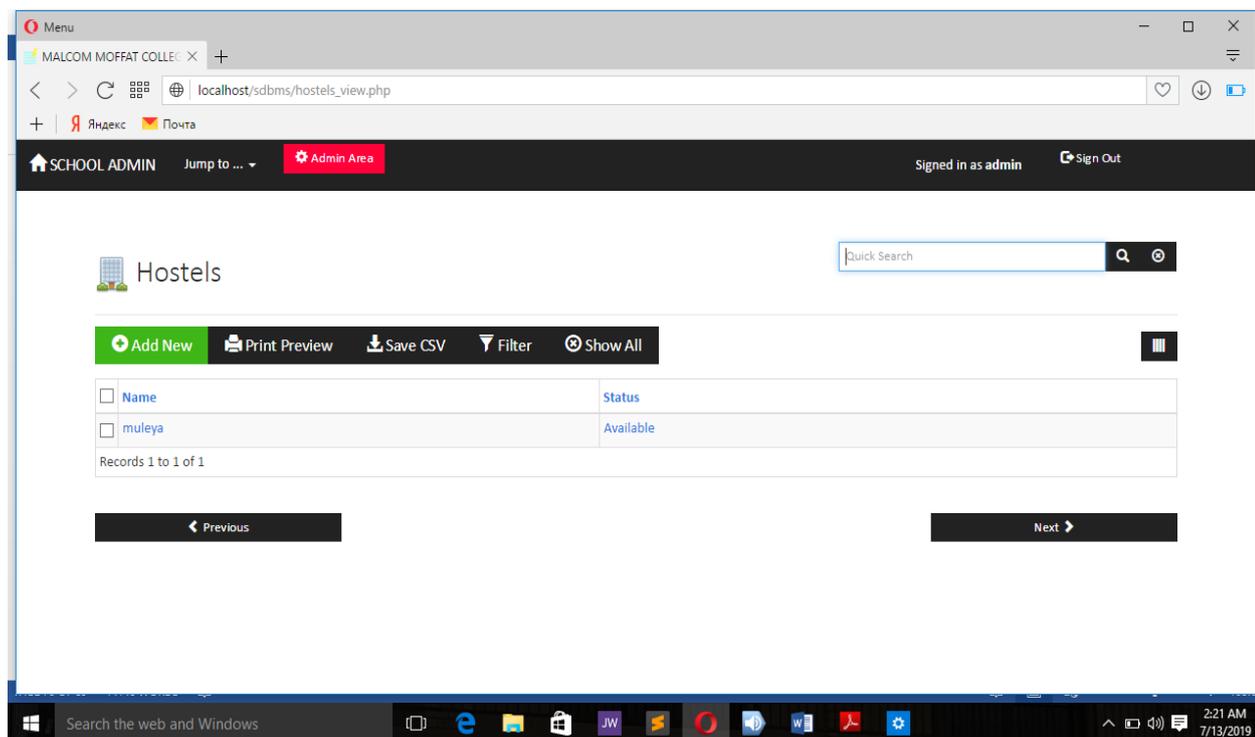
Figure 2. 11 Manage hostels. Authors design 2019

Allocation of hostels to students will be regulated by the system. The system will be fed with the number of bed spaces for each hostel. As students are being allocated these bed spaces then the system will automatically update remaining bed spaces and authorize whether there are available or full.
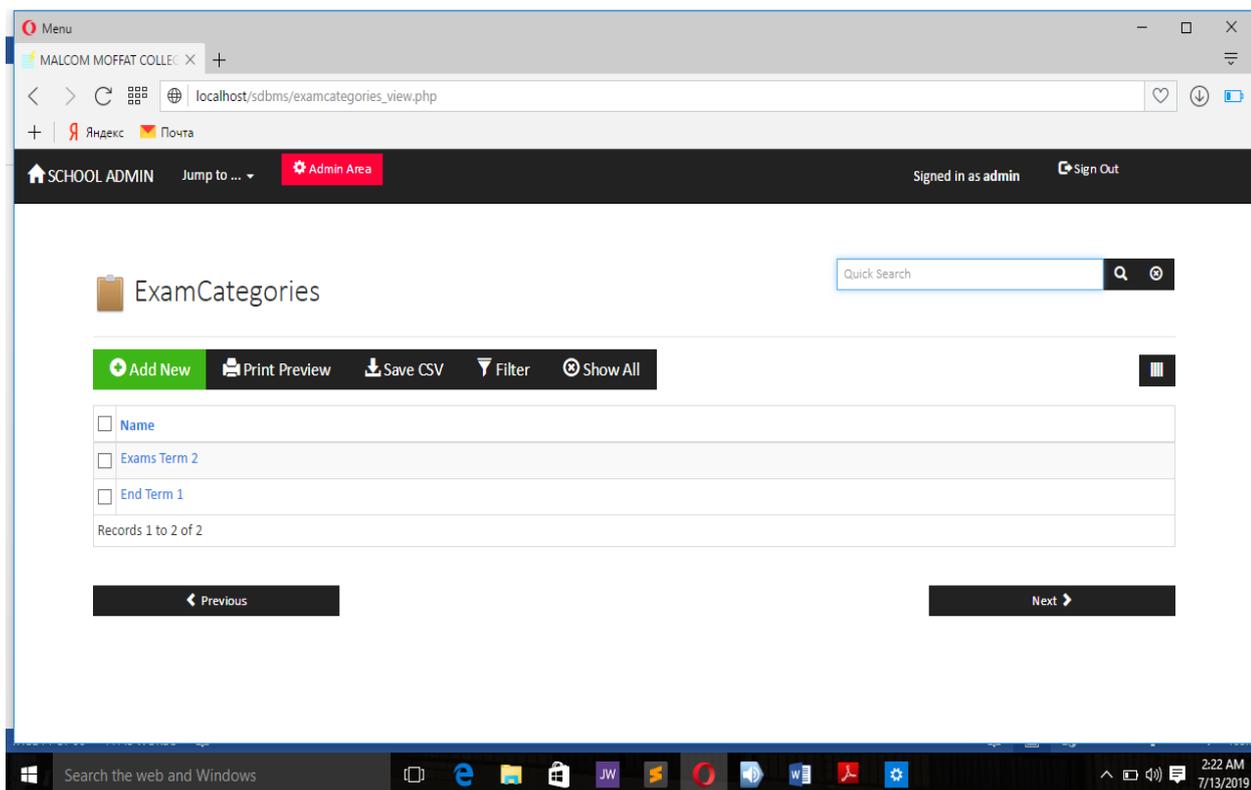
Figure 2.12: **Manage Exams. Authors design 2019**

At the end of every term for fulltime students, the system will be loaded with end term results from the assessments conducted at the end of each term. The same principle applies to distance students at the end of every semester. Students and parents can easily access these results.
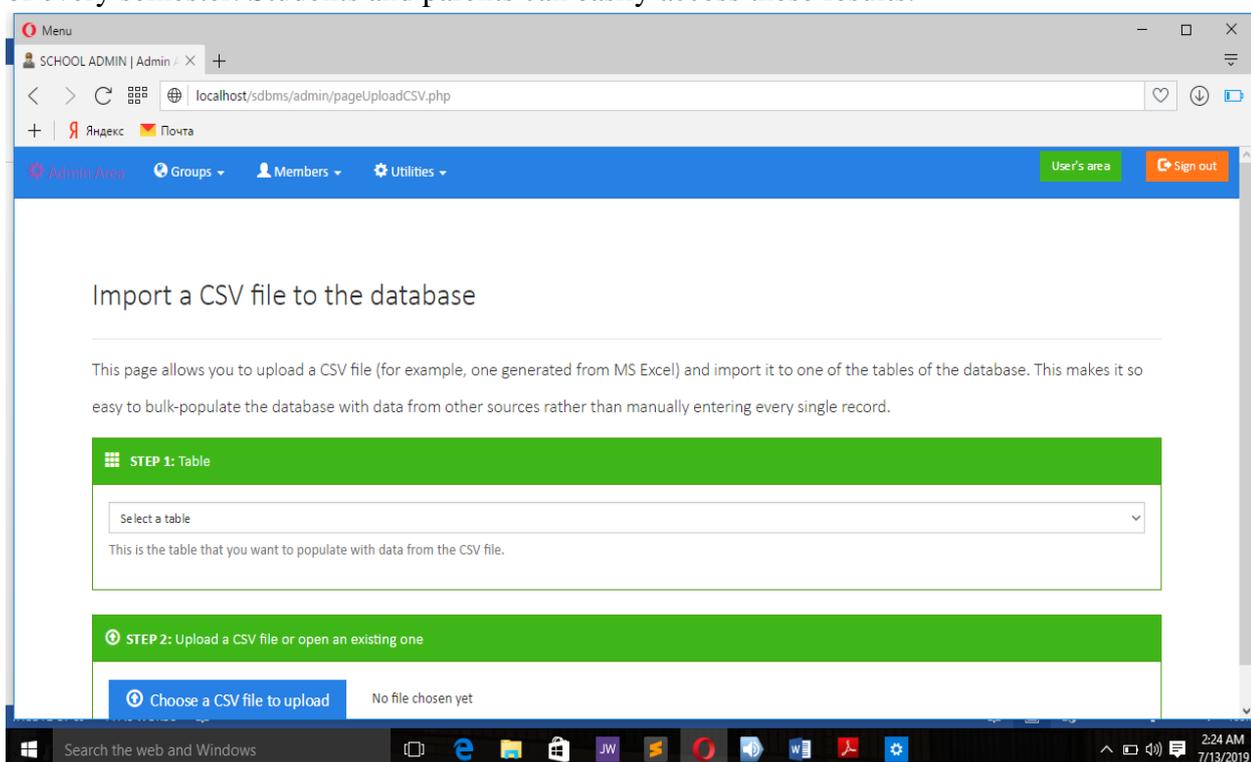
Figure 2.13: **Tabulation Sheet. Authors design 2019**

This sheet will essentially be used the same as the bulky upload above.

Figure below shows how users can manage daily attendance and generate attendance reports.
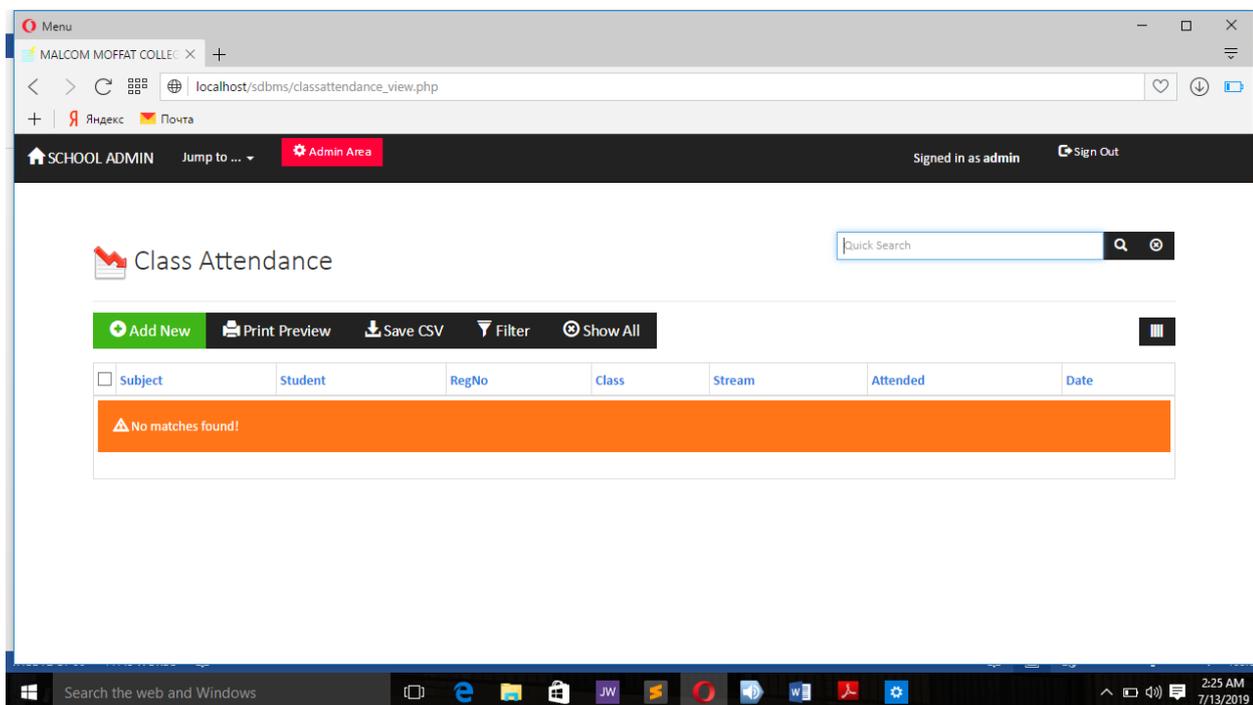
Figure 2.14: **Manage Attendance. Authors design 2019**

Using this module, the lecturer or group admin will feed the system with students details and it will automatically indicate attendance whether that particular student has attended a given lecture or not. At the end of the week, month or term, it will automatically generate the attendance report.
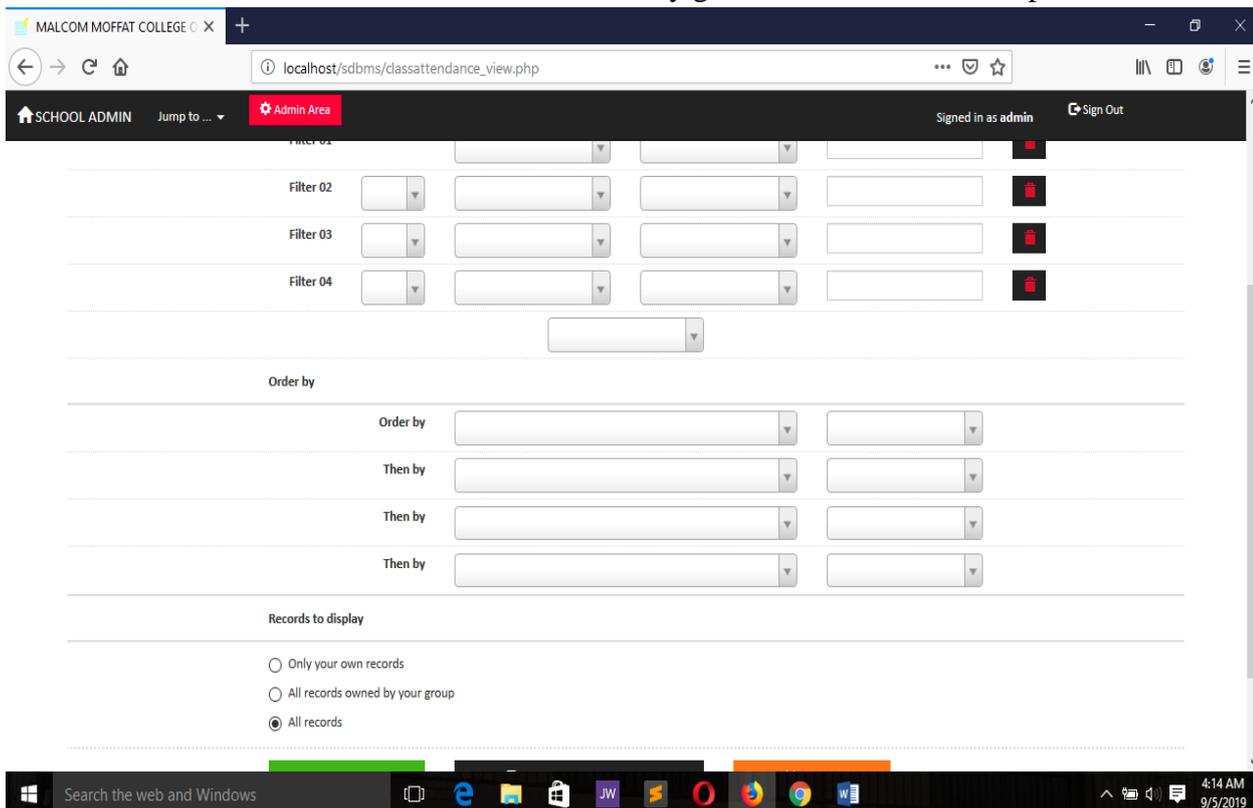
Figure 2.15: **Attendance Report. Authors design 2019**

At the end of the week, month, term or semester or as any given point, attendance record for every student can be queried and accessed as shown above.

Figure 4.16, 4.17 and 4.18 shows how users can manage class and exam schedules throughout different classes.
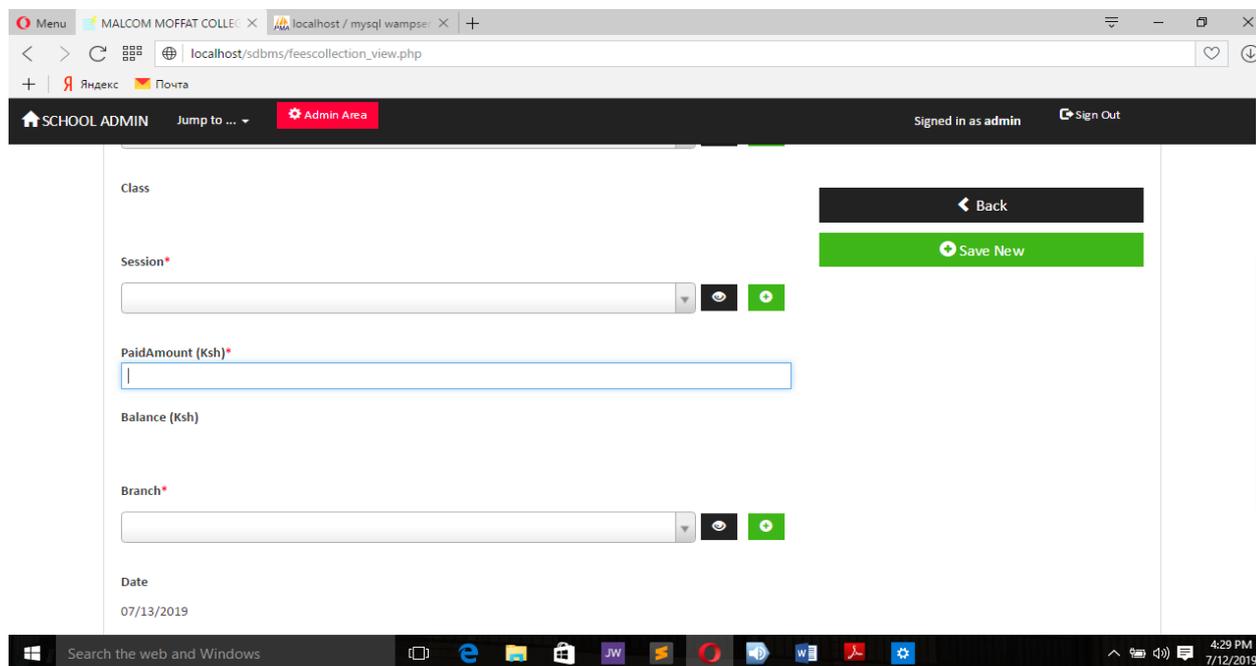
Figure 2.20: **Create payment. Authors design 2019**

Once a student has paid money by depositing a required fee into the stated bank account, he/she will manually take the deposit slip containing his details to the accounts departments to be entered into the system. Since the name is already in the system, the records will be automatically updated and if any balances, it will reflect depending on the class and fees structure involved.
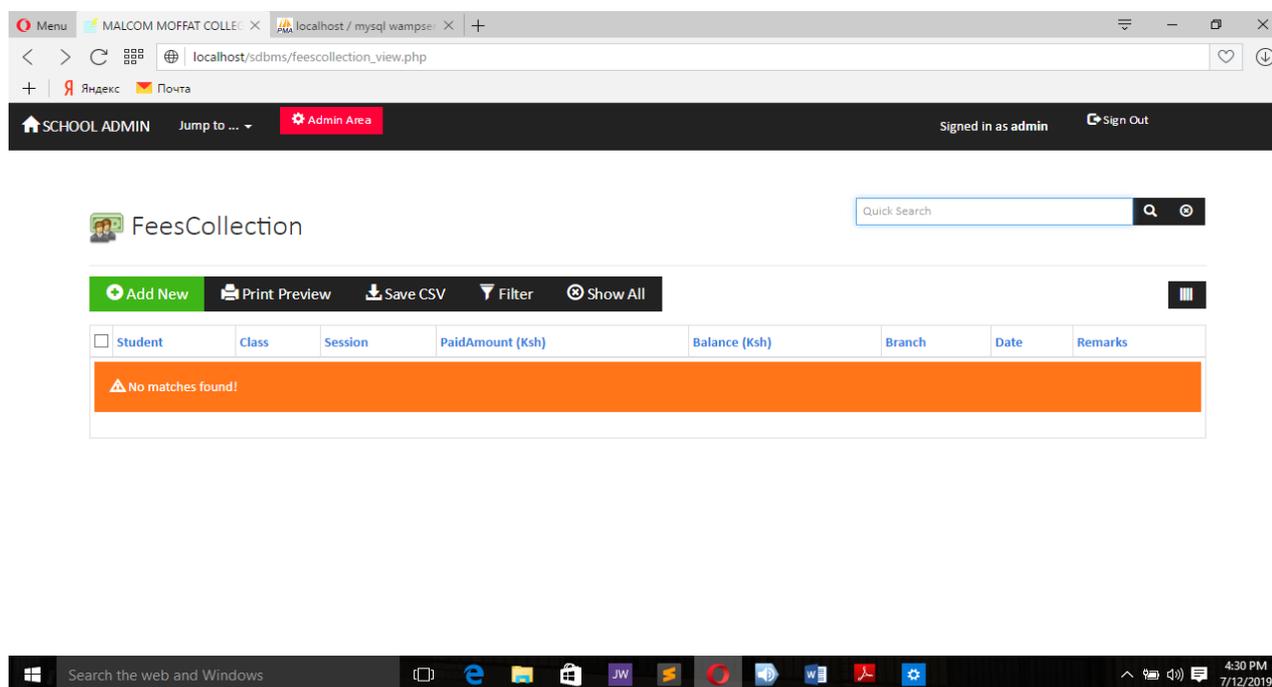
Fig 2.21 Fees collection. **Authors design 2019**

This will simply and entirely for administrative purposes only. The system using this module will automatically be generating a financial standing of the institution. Authorized users by the system administrator will have access to such data. Also, group admins can easily give a financial report generated by the system for a given period of time.

Figure 2.22 **Form for adding new student. Authors design 2019**

Before any other service can be fed into the system, first the student details have to be entered using this form. Specific identification features will help generate a unique ID for the student. Furthermore, even the passport size photo will be required to be uploaded for identification purposes. Upon feeding the system with new student, the system will automatically indicate the date of joining the institution.

Figure 2.23 form for adding results. Authors design 2019

A lecturer, group tutor or group admin can add end of term or semester results using the form above then students and any other authorized user may view the results.
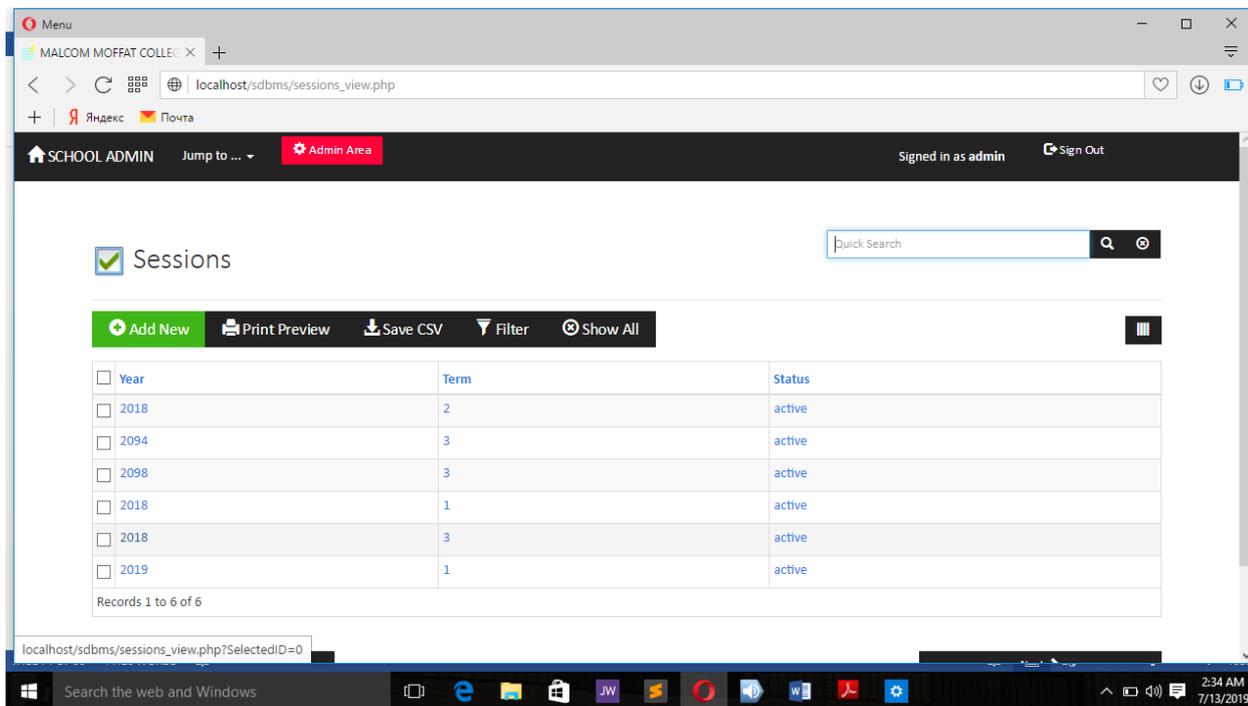
Figure 2.24: **Manage academic sessions. Authors design 2019**

In order for the system to generate accurate reports, attendance records and accept exam results for a given semester, academic sessions have to be updated as active, passed or forthcoming.

Figure 4.25 show that the admin can edit or modify his/her profile.
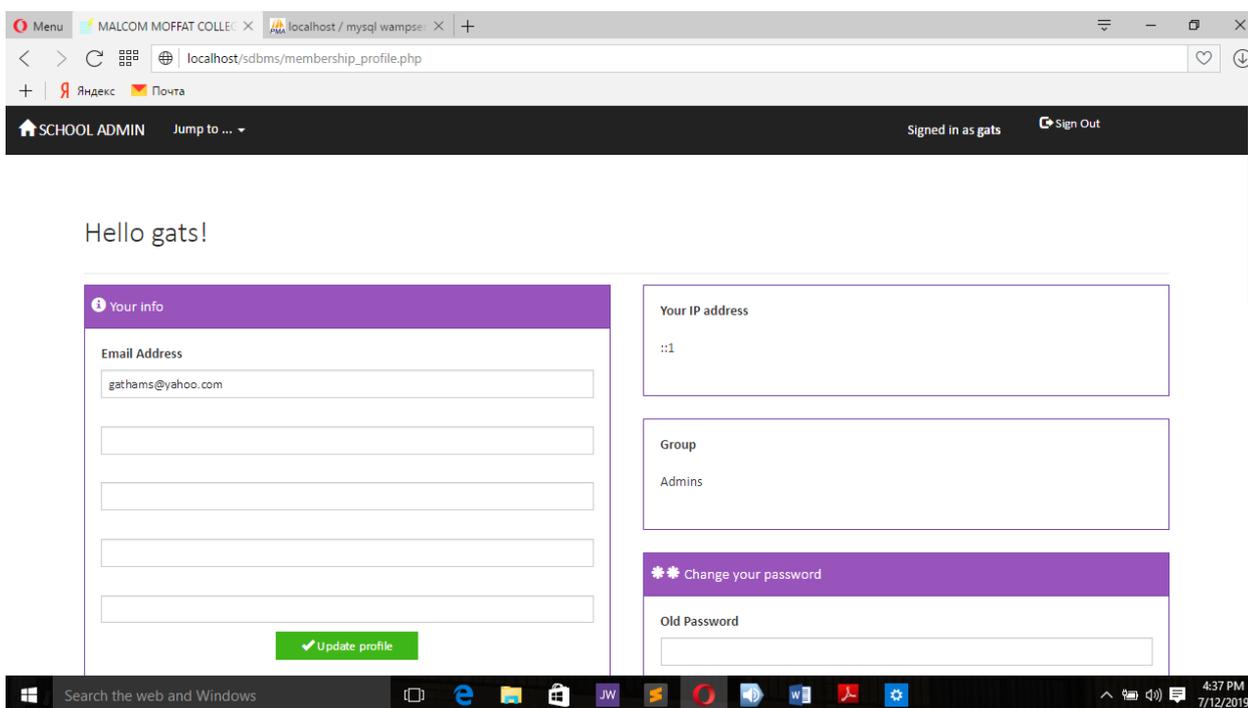
Figure 2.25: **Profile. Authors design 2019**

Using this page, the system admin can modify, update and upload information about and to the user.
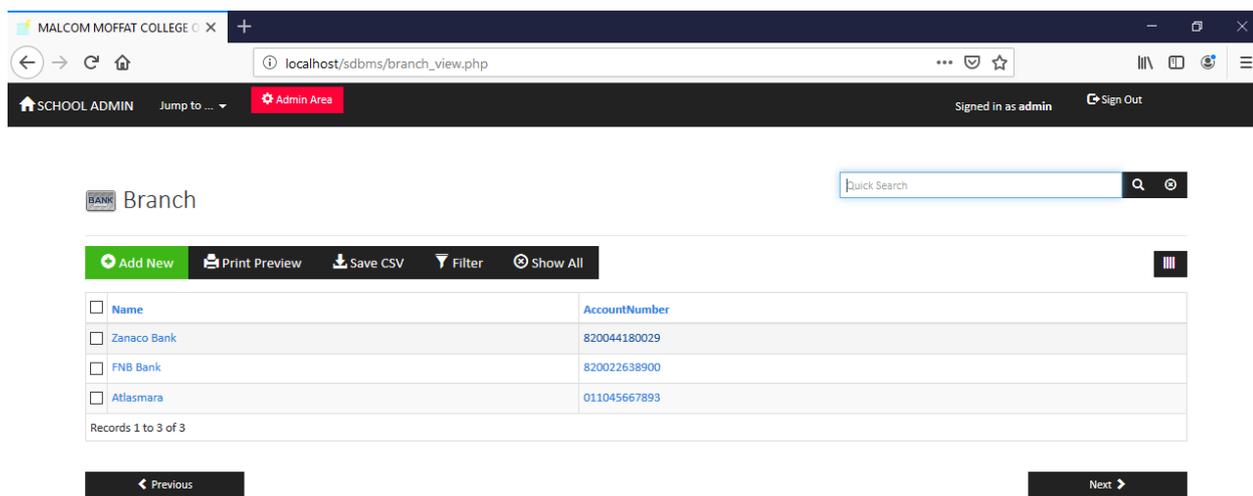
Figure 2.26   **Form for adding Banks. Authors design 2019**

The system administrator will use this form to feed the system with latest bank account name and number where college deposits will be accepted.
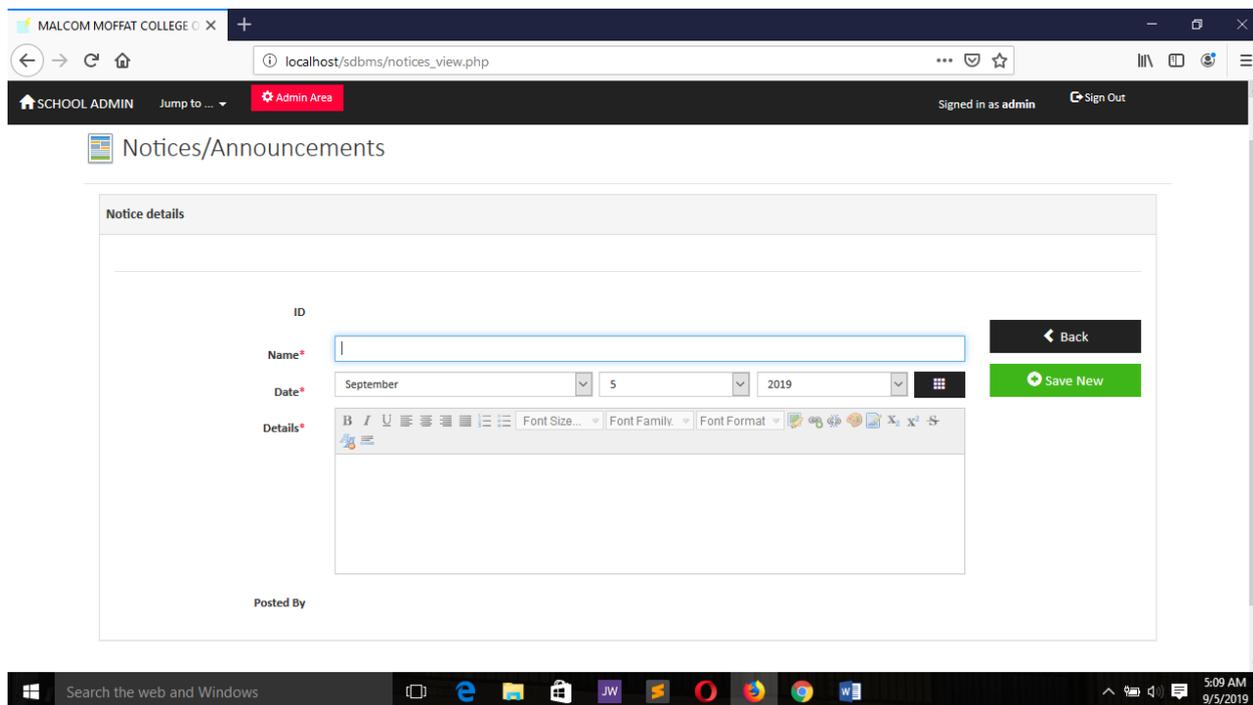
Figure 2.27 Form for adding announcements and notices. Authors design 2019

Information is important in the running of any education institution. If not properly handled it can be misleading and cause dire consequences. Hence any announcement or notice entered into the system should be authentic and approved by responsible admins. The source of that information will be reflected in the system for accountability purposes.

5.0 Results and Evaluation

5.1 Results

A web based fully automated advanced college management system (CAMS) intended to track and store student records is the outcome of the project after a critical analysis, design, building and testing of the system. Evaluation was properly done to ensure that the system meets all the requirements and specifications.

5.2 Evaluation

In a bid to ensure that the new system produced desired results, the prototype of CAMS was subjected to functional requirements tests to ensure that the program code executed correctly (unit testing) and also functional testing to ensure that the program produced desired results for the end users. User acceptance test is another part of the evaluation plan. Since the potential users of the system will be college administrators, lecturers, students and parents, evaluation was done from all sides. Their perception of the system is extremely crucial to whether they will use the system or not. Therefore, students, management, parents and lecturers from Malcolm Moffat College of education were chosen to help in evaluating the system requirement and architecture.

All of them are very happy to see the system developed and running. Web-based system interface is very desirable among the students, management, parents and lecturers. Lecturers and management are more interested in the student management, examination, classes, assessments, and accommodation, timetables and events modules. The accounts department are very happy with the system because it makes their job easy by keeping track of the payments made by students. The exams department is also very happy with the system because it helps with the way the department handles and updates students' results. College management were fully satisfied with integration of various departments to be managed on a single platform.

6. Conclusion

In conclusion, the objectives for this project were achieved and functioned well as the desired target. This system will help the Student Information System database works systematically and will make ease the user in order to manage all the student data in the system. This system will give a better performance in arranging the lecturer and student information without having to do it manually. Furthermore, it will allow the lecturer to focus on other important tasks in the Faculty.

As the future recommendation, the project is recommended to be built with the fully functional software that fulfills all the criteria needed and also applied with more complicated algorithm to the system with the inclusion of other modules like for transport, college farm and hammer mill management.

Information is an indispensable tool that colleges should now be using to advance decision making. Large amount of student's data is generated either manually or electronically on a daily basis. The manual and disintegrated electronic systems have numerous disadvantages because these methods of capturing and managing data about students are prone to data inconsistency, data redundancy, difficult to update and maintain, bad security, difficult to impose constraint on various data file and difficult to backup.

An advanced college management system provides prudent solutions to address problems associated with manual systems. In order to assess the performance of the college and students' overtime, there is the need to use past records of students without any missing data. The integrated student database system which captures and maintains longitudinal data of students would provide an accurate and reliable data about current and past students.

The system is free of errors and very efficient and less time consuming due to the care taken to develop it. All the phases of software development cycle are employed and it is worthwhile to state that the system is very robust. Provision is made for future development in the system.

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7.1 Acknowledgement

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[34]

APPENDIX

```
<div class="content">
<div class="container-fluid">
<? php include("libs/alerts.php"); ?>
```

```
<div class="row"><!--row begins-->
<div class="col-lg-3 col-sm-6">
<div class="card">
<div class="content">
```

```html
<div class="row">
<div class="col-xs-5">
<div class="icon-big icon-warning text-center">
<i class="ti-user"></i>
</div>
</div>
 <div class="col-xs-7">
<div class="numbers">
 <p><strong>STUDENTS</strong></p>
 <?php countrecords("students"); ?>
 </div>
 </div>
 </div>
 <a href="students_view.php">
<div class="footer">
<hr />
<div class="stats">
 <i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
<div class="col-xs-5">
<div class="icon-big icon-success text-center">
<i class="ti-wallet"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
 <p> <strong>COLLEGE PAYMENTS</strong></p>
<?php countrecords("feescollection"); ?>
</div>
</div>
</div>
 <a href="feescollection_view.php">
<div class="footer">
<hr />
<div class="stats">
 <i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
```

```html
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
<div class="col-xs-5">
<div class="icon-big icon-danger text-center">
<i class="ti-credit-card"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p> <strong>Banks</strong></p>
<?php countrecords("branch"); ?>
</div>
</div>
</div>
<a href="branch_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
</a>
</div>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
<div class="col-xs-5">
<div class="icon-big icon-info text-center">
<i class="ti-id-badge"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
 <p><strong>LECTURERS</strong></p>
<?php countrecords("teachers"); ?>
</div>
</div>
</div>
 <a href="teachers_view.php">
<div class="footer">
<hr />
<div class="stats">
```

```
<i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
</div>
</div>
</div><!--row ends-->
<!--row begins-->
<div class="row">
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
 <div class="col-xs-5">
 <div class="icon-big icon-warning text-center">
 <i class="ti-harddrives"></i>
 </div>
 </div>
 <div class="col-xs-7">
 <div class="numbers">
 <p><strong>COURSES</strong></p>
<?php countrecords("subjects"); ?>
 </div>
 </div>
 </div>
 <a href="subjects_view.php">
 <div class="footer">
 <hr />
 <div class="stats">
 <i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
 <div class="col-xs-5">
 <div class="icon-big icon-success text-center">
 <i class="ti-crown"></i>
 </div>
 </div>
 <div class="col-xs-7">
 <div class="numbers">
 <p><strong>CLASSES</strong></p>
```

```
<?php countrecords("classes"); ?>
 </div>
 </div>
 </div>
<a href="classes_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
 <div class="col-xs-5">
 <div class="icon-big icon-danger text-center">
 <i class="ti-blackboard"></i>
 </div>
 </div>
 <div class="col-xs-7">
 <div class="numbers">
 <p><strong>ADDRESS</strong></p>
<?php countrecords("streams"); ?>
 </div>
 </div>
 </div>
 <a href="streams_view.php">
 <div class="footer">
 <hr />
 <div class="stats">
 <i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
 </div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
 <div class="col-xs-5">
 <div class="icon-big icon-info text-center">
 <i class="ti-home"></i>
```

```html
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p><strong>COLLEGE HOSTELS</strong></p>
<?php countrecords("hostels"); ?>
</div>
</div>
</div>
<a href="hostels_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
</a>
</div>
</div>
</div><!--row ends-->
</div>
<!--row begins-->
<div class="row">
<div class="col-lg-3 col-sm-6">
<div class="card">
<div class="content">
<div class="row">
<div class="col-xs-5">
<div class="icon-big icon-warning text-center">
<i class="ti-layers-alt"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p><strong>COLLEGE                    TIME
TABLES</strong></p>
<?php countrecords("timetable"); ?>
</div>
</div>
</div>
<a href="timetable_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
</a>
</div>
```

```html
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
<div class="content">
<div class="row">
<div class="col-xs-5">
<div class="icon-big icon-success text-center">
<i class="ti-flag-alt"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p><strong>MAIN EVENTS</strong></p>
<?php countrecords("events"); ?>
</div>
</div>
</div>
<a href="events_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
</a>
</div>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
<div class="content">
<div class="row">
<div class="col-xs-5">
<div class="icon-big icon-danger text-center">
<i class="ti-announcement"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p><strong>IMPORTANT NOTICES</strong></p>
<?php countrecords("notices"); ?>
</div>
</div>
</div>
<a href="notices_view.php">
<div class="footer">
<hr />
<div class="stats">
```

```
 <i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
 <div class="col-xs-5">
 <div class="icon-big icon-primary text-center">
 <i class="ti-cup"></i>
 </div>
 </div>
 <div class="col-xs-7">
 <div class="numbers">
 <p><strong>RESULTS</strong></p>
 <?php countrecords("examresults"); ?>
 </div>
 </div>
 </div>
 <a href="examresults_view.php">
 <div class="footer">
 <hr />
 <div class="stats">
 <i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
</div><!--row ends-->
</div>
<!--row begins-->
<div class="row">
<div class="col-md-12">
<div class="card">
 <div class="header">
 <h4 class="title">Recent Fee Collection</h4>
 <p class="category">Fees collection by date</p>
 </div>
 <div class="content table-responsive table-full-width">
 <table class="table table-striped">
 <thead>
 <th>STUDENT ID</th>
 <th>STUDENT Name</th>
 <th>Amount PAID</th>
```

```
 <th>Balance</th>
 </thead>
 <tbody>
 <?php getrecentfees("feescollection"); ?>

 </tbody>
 </table>
 </div>
 </div>
</div><!--row ends-->
</div>
<!--row begins-->
<div class="row">
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
 <div class="col-xs-5">
 <div class="icon-big icon-warning text-center">
 <i class="ti-user"></i>
 </div>
 </div>
 <div class="col-xs-7">
 <div class="numbers">
 <p><strong>PARENTS/ GUARDIANS</strong></p>
 <?php countrecords("parents"); ?>
 </div>
 </div>
 </div>
 <a href="parents_view.php">
 <div class="footer">
 <hr />
 <div class="stats">
 <i class="ti-arrow-right"></i>View
 </div>
 </div>
 </a>
 </div>
 </div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
 <div class="row">
 <div class="col-xs-5">
 <div class="icon-big icon-success text-center">
 <i class="ti-tag"></i>
 </div>
 </div>
```

```
<div class="col-xs-7">
<div class="numbers">
<p><strong>EXAMS</strong></p>
<?php countrecords("examcategories"); ?>
</div>
</div>
</div>
<a href="examcategories_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
</a>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
<div class="content">
<div class="row">
<div class="col-xs-5">
<div class="icon-big icon-danger text-center">
<i class="ti-key"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p><strong>SESSIONS</strong></p>
<?php countrecords("sessions"); ?>
</div>
</div>
</div>
<a href="sessions_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
</a>
</div>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
<div class="content">
<div class="row">
```

```
<div class="col-xs-5">
<div class="icon-big icon-info text-center">
<i class="ti-bar-chart-alt"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p><strong>ATTENDANCE</strong></p>
<?php countrecords("classattendance"); ?>
</div>
</div>
</div>
<a href="classattendance_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
</a>
</div>
</div>
</div><!--row ends-->
</div>
<!--row begins-->
<div class="row">
<div class="col-lg-3 col-sm-6">
<div class="card">
<div class="content">
<div class="row">
<div class="col-xs-5">
<div class="icon-big icon-danger text-center">
<i class="ti-write"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p><strong>Fees Structure</strong></p>
<?php countrecords("schoolmoney"); ?>
</div>
</div>
</div>
<a href="schoolmoney_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
```

```
</a>
 </div>
</div>
</div>
<div class="col-lg-3 col-sm-6">
<div class="card">
 <div class="content">
<div class="row">
<div class="col-xs-5">
<div class="icon-big icon-info text-center">
<i class="ti-stats-up"></i>
</div>
</div>
<div class="col-xs-7">
<div class="numbers">
<p><strong>STUDENT TYPES</strong></p>
<?php countrecords("studentcategories"); ?>
</div>
</div>
</div>
<a href="studentcategories_view.php">
<div class="footer">
<hr />
<div class="stats">
<i class="ti-arrow-right"></i>View
</div>
</div>
 </a>
 </div>
</div>
</div><!--row ends-->
</div>
 <div style="padding:0px; margin:0px; background-
color:#fff;font-family:arial,helvetica,sans-
serif,verdana,'Open Sans'">
 <?php include("slides.php"); ?>
 </div>
<!--cards and widgets above here-->
<footer class="footer">
<div class="container-fluid">
<nav class="pull-left">
<ul>

<li>
 <a href="#">
<strong>COLLEGE</strong>
 </a>
</li>
<li>
```

```
 <a href="#">
 <strong>ADVANCED</strong>
 </a>
</li>
<li>
 <a href="#">
 <strong>MANAGEMENT</strong>
 </a>
</li>
<li>
 <a href="#">
 <strong>SYSTEM</strong>
 </a>
</li>
</ul>
</nav>
<div class="copyright pull-right">
&copy;                 <script>document.write(new
Date().getFullYear())</script>,    Designed    and
Maintained By: NGOSA GATHAM 1606215635 CELL
0976-202933/ 0966202933
</div>
</div>
</footer>

</div>
</div>


</body>

<!-- Core JS Files -->
<script              src="assets/js/jquery-1.10.2.js"
type="text/javascript"></script>
        <script        src="assets/js/bootstrap.min.js"
type="text/javascript"></script>

        <!--Checkbox, Radio & Switch Plugins -->
        <script      src="assets/js/bootstrap-checkbox-
radio.js"></script>

        <!--Charts Plugin -->
        <script src="assets/js/chartist.min.js"></script>

<!--Notifications Plugin-->
<script src="assets/js/bootstrap-notify.js"></script>

<!--Google Maps Plugin-->
```

```
<script                         type="text/javascript"
src="https://maps.googleapis.com/maps/api/js"></scrip
t>

<!-- Paper Dashboard Core javascript and methods for
Demo purpose -->
        <script                    src="assets/js/paper-
dashboard.js"></script>

        <!-- Paper Dashboard DEMO methods, don't
include it in your project! -->
        <script src="assets/js/demo.js"></script>

        <script type="text/javascript">
        $(document).ready(function(){

        demo.initChartist();

        $.notify({
        icon: 'ti-gift',
        message: "Welcome to <b> collegeadvanced
Management System admin</b> - a beautiful system for
managing your college"

},{
type: 'success',
timer: 3000
});

        });
        </script>

</html>
```