

DEVELOPMENT OF STUDENT INFORMATION MANAGEMENT SYSTEM
(A CASE STUDY OF COMPUTER SCIENCE DEPARTMENT, FUOYE)

BY

ADEKOLA FADEKEMI TOLULOPE

(CSC/11/0267)

BEING A PROJECT RESEARCH SUBMITTED

TO THE

DEPARTMENT OF COMPUTER SCIENCE,

FACULTY OF SCIENCE

FEDERAL UNIVERSITY OYE-EKITI,

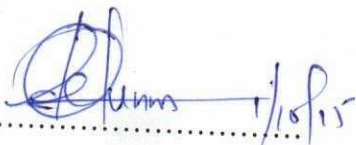
EKITI STATE, NIGERIA.

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD
OF DEGREE OF BACHELOR OF SCIENCE (B.Sc) IN COMPUTER SCIENCE

OCTOBER, 2015

CERTIFICATION

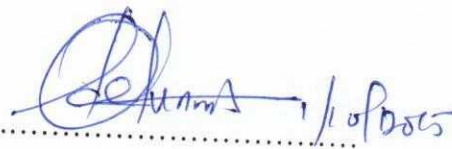
This is to certify that this research was carried out and compiled by ADEKOLA, Fadekemi Tolulope with matriculation number CSC/11/0267, a student of the Department of Computer science, Faculty of science, Federal University Oye Ek'iti, Ekiti State, in partial fulfillment of the requirements for the award of Bachelor of Science (Hons.) in Computer Science.



.....
SIGNATURE/DATE

PROJECT SUPERVISOR

Dr. ADETUNMBI A. O



.....
SIGNATURE/DATE

HEAD OF DEPARTMENT

Dr. ADETUNMBI A. O

DEDICATION

I dedicate this research project first and foremost to Almighty God who has been there right from the beginning to this very point.

Special dedication also to my ever supportive parents for their relentless efforts and compassion towards me during the years of my pursuit for this degree.

To God be the glory.

ACKNOWLEDGEMENT

To GOD, the keeper of my dreams, I say a very big thank you for seeing me through four years of academic pursuit and guiding my path towards the right direction always.

To my parents, Evangelist and Deaconess O. R. ADEKOLA; your immeasurable love, care, support and prayers cannot be overemphasized. It's a blessing to have you as my parents. May the good LORD continually strengthen you, increase you in grace and make you eat the fruits of your labour over us all.

To all members and staff of Computer Science department headed by highly esteemed Dr. Adetunmbi A. O, I say a very big thank you for consistently impacting knowledge to me during my pursuit for this degree.

My sincere gratitude also goes to my project supervisor, Dr. Adetunmbi A. O for his fatherly support and care before and during the period of this project research.

To my siblings; Adedoyin, Adeola, Adepeju and Tejumade; you are my joy and source of happiness. Together, we shall move to greater heights.

To a mother, coach, model and mentor, Evangelists Daramola; you have been divinely orchestrated by GOD to be a part of my life. GOD is definitely taking you places beyond your expectations.

To my Pastor and wife, Pastor & Deaconess Oludare O. J., your parental love is highly appreciated. May all your heart desires be granted you. Amen. To all members of RCCG OVERCOMERS PARISH, I love and appreciate you all.

To special friends like Bro Femi, Raji Abimbola, Akintade Christopher, Adeleye Temitope, Aworinde Omowunmi, Okunmuyide Temitope, Aunty Ibukun, olubunmi and every of my departmental mate, the LORD will preserve us for better days to come. Amen.

To everyone that has at one point or the other added value to my life; among which a few are; A/P (Mrs.) Adeyemi, Mr. & Mrs. Osamoka S., Mr. & Mrs. Amudipe E., Mr. & Mrs. Onipede, Mr. & Mrs. Oluwadare D., Mr. Fatimilehin Toyin, Mrs. Adeyeye Titi, Coachfaith, Mr. and Mrs. Odewumi and many others, may the good LORD strengthen and bless you all. Amen.

The list is endless and I am so blessed to be surrounded by you all.

Hope to see you in the better days ahead!

ADEKOLA FADEKEMI TOLULOPE

TABLE OF CONTENTS

TITLE PAGE	i
CERTIFICATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENT	viii
LIST OF TABLES	ix
LIST OF FIGURES	x
ABSTRACT	xi
CHAPTER ONE	
INTRODUCTION	1
1.1 BACKGROUND OF STUDY	4
1.2 AIMS AND OBJECTIVES	4
1.2.1 AIMS	4
1.2.2 OBJECTIVES	4
1.3 SIGNIFICANCE OF STUDY	5
1.4 SCOPE	5

1.5 PROBLEM STATEMENT	5
1.6 LIMITATIONS OF THE STUDY	6
CHAPTER TWO	
LITERATURE REVIEW	7
2.1 DATA AND INFORMATION	7
2.2 COMPUTER-BASED ONLINE INFORMATION SYSTEM	8
2.3 DATABASES	9
2.4 SCHOOL MANAGEMENT SYSTEMS	12
2.5 STUDENT INFORMATION MANAGEMENT	15
2.6 RECENT RELATED WORKS	18
CHAPTER THREE	
METHODOLOGY	21
3.1 OVERVIEW OF THE SYSTEM	21
3.2 MODULES IN THE DESIGNED SYSTEM	32
CHAPTER FOUR	
SYSTEM IMPLEMENTATION	38
4.1 SOFTWARE REQUIREMENT	40
4.2 HARDWARE REQUIREMENT	40

4.3 THE MODULES	40
4.3.1 HOMEPAGE	40
4.3.2 ADMISSION ZONE	41
4.3.3 STUDENT ZONE	43
4.3.4 LECTURER ZONE	43
4.3.5 HOD ZONE	44
4.3.6 ADMINISTRATOR ZONE	45
4.3.7 ABOUT US	46
CHAPTER FIVE	
CONCLUSION AND RECOMMENDATION	47
CONCLUSION	47
RECOMMENDATION	47
REFERENCE	49
APPENDIX	53

LIST OF TABLES

Table 3.1: User Description	22
Table 3.2: Database Table for Admission zone	33
Table 3.3: Database Table for Student zone	33
Table 3.4: Database Table for Lecturer zone	35
Table 3.5: Database table for HOD zone	36
Table 3.6: Database Table for Administrator zone	36

LIST OF FIGURES

Fig 3.1: Use Case Diagram for Student Information Management System	23
Fig 3.2: Detailed Student Use Case Diagram	24
Fig 3.3: Normalized Entity Relationship Diagram	29
Fig 3.4: Decomposition diagram of the proposed system	30
Fig 3.5: System Logon Flowchart	31
Fig 4.1: Printscreen for the homepage	41
Fig 4.2: Printscreen for admission logon zone	42
Fig 4.3: Printscreen for admission zone details	42
Fig 4.4: Printscreen for student zone	43
Fig 4.5: Printscreen for lecturer zone	44
Fig 4.6: Printscreen for HOD zone	45
Fig 4.7: Printscreen for administrator zone	46
Fig 4.8: Printscreen for about us zone	46

ABSTRACT

Student Information Management System (SIMS) provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. A number of problems associated with student academic record management include improper course registration, late release of students' results, inaccuracy due to manual and tedious calculation and retrieval difficulties/inefficiency. In most cases the data generated by academic institutions are usually created in non-delineated files for use by different departments/units within the institutions with the same data appearing on several of these files. This means that a simple change of address would have to be processed in two and probably three or four places, depending on the number of other files on which these data appears. The development of database concept is the answer to these problems where the amount of redundant data is reduced and the possibility that data contained on a file might be inaccurate because they were never updated.

The system presents a single platform that will be used to manage and process data for all categories of students in a seamless and interactive manner. The design technology adopted for the implementation is a client/server technology, with MYSQL as the server technology and PHP as the client technology. Apache is used as the Web server. The data used were obtained from the department of Computer science, Federal University Oye-Ekiti. This system will increase efficient service delivery and provides added advantage in the department. The developed system has been tested and yielded a satisfactory result but there is still need for further research on this work for it to be able to compute results for the department to reduce mistakes in computation of result and loss of results.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

During the last decade, the use of Electronic Student Information Systems (SIS) in education has dramatically increased. With the growing strategic importance of SIS, more school districts are implementing SIS. Barrett (1999) noted that in an effort to efficiently document and maintain accountability data, schools are relying more on technology in the form of student management information systems (SMIS). Regardless of its content, a student information system is designed to meet one primary goal: improved student achievement. School districts committed to improving student learning analyze data in order to plan for the future through understanding, among other things, the current and future needs of the district, schools, students, teachers, parents, and community (Bernhardt 2006). But student data are often stored in forms that are difficult to access, manipulate, and interpret (Wayman, 2005).

Until fairly recently, student records were not readily available to students, teachers, parents, and school administrators. Student records traditionally have been kept only at the school or district level. In recent years, however, many state education agencies have begun to collect individual student record, state-level records typically consist of data about student characteristics, program participation and assessment results—a subset of the data usually maintained at the school and district levels” (National center for education statistics, 2000). Web-based student information systems such as PowerSchool, ISparta, and TeacherEase have helped improve student records management, and school improvement plans. These tools are reported to be useful for administrators and teachers alike. Administrators no longer need to

run from classroom to classroom or search from file to file to get the information they need, as the system (PowerSchool) provides instant access to all student records with a simple point and click.

Despite the fact that student information systems play a vital role in school administration, schools have not always been early adopters of efficient and effective student data management technologies. Barrett (1999) observes that although the use of information systems to immediately access accurate and comprehensive information is critical for a successful business, schools often lagged behind in the implementation of information technologies.

Feldman and Tung (2001) observed that schools are inundated with a wide variety of data and are looking at ways to understand how to interpret the data that is provided to them, as well as how to use the process of inquiry to improve the quality of instruction offered by their school. In the past, the usual way typical school district personnel dealt with data was to analyze the dickens out of their annual state assessment results, develop a plan to increase the lowest scores, and then wait for the next year's results to come out to know if their plan made a difference. Many found they could improve their assessment results in that area, only to discover that other subject-area scores declined (Bernhardt, 2006).

The data generated by organizations are usually created in files for use by different departments/units within the organization. If the data contained in these files are not carefully delineated it is very likely that the same data will appear on several of these files. That is, these files would contain redundant data for instance the University registry file and college or department file would contain the name and address of a student. This would mean that a

simple change of address has to be processed in two and probably three or four places, depending on the number of other files on which these data appears.

Various applications have been developed to address a number of redundancies of data and the possibility that data contained on a file might be inaccurate because they were never updated but the proprietary nature of user-oriented systems has not made it possible to have a good survey of such systems. There is a wide array of existing information and information needs, yet schools are often limited by personnel and financial concerns.

Student Information Management System (SIMS) provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of accurate, up-to-date information regarding a students' academic career is critically important in the university as well as colleges. Student information system deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It tracks all the details of a student from the day one to the end of the course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters, years, coming semester year curriculum details, exam details, project or any other assignment details, final exam result and all these will be available through a secure, online interface embedded in the college's website.

Different reports and Queries can be generated based on vast options related to students, batch, course, faculty, exams, semesters, certification and even for the entire college. This system will provide a simple interface for the maintenance of student information. It can be used to maintain the records of students easily. Achieving this objective is difficult using a manual system as the information is scattered, can be redundant and collecting relevant information

may be very time consuming. All these problems are solved using online student information management system. The project focuses on developing information system in an easy and intelligible manner which provides facilities like profile creation of student's thus reducing paper work.

1.2 AIM AND OBJECTIVES

1.2.1 AIM

The purpose of this research is to provide means to effectively maintain accurate, up-to-date student database that can be quickly and easily accessed and provide an efficient means to collect, collate, interpret, and administer students' results error-free; enabling prompt processing and releasing of relevant academic document (like transcripts, statement of results, etc) in real-time fashion; providing effective means to secure and protect students' data against infiltration and unforeseen disaster.

1.2.2 OBJECTIVES

The specific objectives are to:

- i. design an information system that will provide a single platform to manage and process the data of different categories of students; and
- ii. implement the design of the information system in 1.2.2 (i).

1.3 SIGNIFICANCE OF STUDY

The project work will help in a good number of ways to ease the accuracy in the university as the student information management system will help student to achieve whatever they want to achieve stress and missing of document.

Clear advantages of internet information processing over those of traditional manual system are higher yields and as follows:

- To develop an information system that will provide a single platform to manage and process the data of different categories of students.
- To develop information system that will serve as an interface between students and institution management to enable students promptly check their grades, as well as track their progress.
- To develop an information system that will produce information to aid decision-making at management level.

1.4 SCOPE OF THE STUDY

This project work is to develop a computer software based student information management system for computer science students of Federal University Oye Ekiti as a case study which also can be adopted by other departments. The software development will be carried out using PHP for frontend and MYSQL for backend.

1.5 STATEMENT OF THE PROBLEM

Perhaps it would not be an overstatement to say that record keeping problems are common to the different levels of the education sector. It is however becoming clearer that it is more

pronounced in the university system because accurate, reliable and trustworthy records that fulfill evidential requirements are being created but not properly managed. This therefore becomes an issue of great concern to government, parents, students, individuals and organizations. In the past, frantic efforts to improve the situation in many universities through the introduction of computers and internet services as well as development of database management system do not seem to have helped the situation much because the record management system is still conventionally paper-based and manual in operation. Many management staff complains of funds, and material resources. The reality reveals gross inadequacy of qualified personnel, facilities, students' explosion and space problem.

1.6 LIMITATIONS OF THE STUDY

Some limitations experienced in the course of this project are listed below:

- Inadequate power supply used to carry out the development
- Inadequate finances to carry out project research: Finances are very important in making a research; therefore the absence thereof brings limitation.
- Time constraint

- b. Management information system (MIS). These summarize the detailed data of the transaction processing system standard report for middle level managers. Such report might include production schedules and budget summarizes.
- c. Decision support system (DSS); The DSS provide the flexible tools for analyzes. The DSS help middle level managers and other in the organization analyze a wide range of problem, such as effect of event and trend outside the organization. Like the MIS, the DSS draws on the detailed data of transaction processing system.
- d. Executive support system (ESS): The ESS is easy-to-use systems that present information in a very highly summarized form. It helps top level management to oversee the company operation and develop strategic plans. The ESS combines internal data from TPS and MIS with external data.

2.3 DATA BASES

In the early days of computerization, it was normal to maintain specific files for individual application. Data where processes centrally in batches and there was little or no online interrogation of data. This approach is wholly inefficient for most of today's data processing systems. Supporting this Vossen (1991) enumerated the problems that result from organizing the data using the file system.

- a. There exist a high redundancy between files which result from the fact that the information is replicated in different places, and that these replications are not controlled by a central monitor

- b. Inconsistencies might result from the possibilities that a program makes changes on the files it uses without these changes being made (at the same time) by all other programs that uses the files.
- c. There exist in flexibility against changes in the application: if new actions or event arise in the cause of time, these can be realize at a substantial expense of time.
- d. The work of many programmers involved is characterize by low productivity, seems program maintenance is expensive: if the structure of an existing file has to be modify during it life time, then all application program has to be modify correspondently
- e. Finally, there is the problem of adopting and maintaining standard (with respect to coding data format etc), which is important for exchanging data or for migration to new operating system released, or even to a new computer system.

To overcome these problems, data bases where developed. It is now common for large organization to organize their operational data using the data base technology.

The subject of data is adequately covered in many works in data base technology. Clifton (1983) briefly define data base as a collection of data supporting the operation of an organization.

A data base is a file of data structured in such a way that it may serve a number of application without it structure being dictated by any one of those application, the concept being that programs are written round the data base rather than files being structure to meet the need of particular programs.

Russel (1987) dealt extensively on the need for the use of computer on such data base system like computerized clearance system. In the world of Dimorji (2003) "At the center of any

information system is a data base, which is any collection of related information grouped together as a simple item. The term can also apply to the ways in which information is catalogued, analyzed, stored and used manually”.

Rossell (2005) was also of the view that without computer, effective handling of candidate record cannot be achieved effectively in a data base, all the data is defined together rather than each file being define separately. In fact, all the literature consulted seem to support the fact that a data base is a collection of structured data with the structure of data being independent of any particular application. Specify the need for data base, O’leary (1996) listed the following advantages:

- a. Sharing: in an organization, information from one department can be readily shared with others.
- b. Security: users are giving password or access only to the kind information they need to know. Thus, the payroll department may have access to employees pay rate but they would not.
- c. Fewer files: with several departments having access to one files, there are fewer files therefore, excess storage or what is called redundancy is reduced.
- d. Data Integrity: older filing system many times did not have integrity i.e. a change made in the file in one department might not be made in the file in another department. As one might expect, these can cause serious problems and conflict when data is used for important decision affecting the department.

To advantages enumerated above, Vossen (1991):

- a. Standard/access protocols can be enforced.

- b. Currency of data can be maintained.
- c. Data/program independent can be maintained.
- d. Conflicting requirement can be balanced among users.

In these days of integrated networks, the database appeared as the most logical method for organizing the operational data of large organizations. One may as well say that these advantages give the database the attraction over the traditional file processing method.

2.4 SCHOOL MANAGEMENT SYSTEMS

Automate The Schools: Automate the Schools (ATS) is the school-based administrative system used by all New York City public schools since 1988 (Kumar, 2000). It has many functions, including recording biographical data for all students, handling admissions, discharges, and transfers to other schools, and recording other student-specific data, such as exam scores, grade levels, attendance, and immunization records. It also provides aggregate student and human resources data to school administrators.

School Loop: School Loop is an online application for Elementary school, middle school and high school students to view their grades online and communicate with teachers. It allows staff to upload a student's grades onto the Internet for immediate viewing. Current assignments and files may also be posted on School Loop, and a feature known as "drop box" allows students to electronically submit their work. Teachers can post homework for students, school announcements, and downloads. Class-specific information can be provided in a teacher's personal School Loop webpage. Students can see their homework assignments, school announcements and group discussions on School Loop. Both teachers and students can e-mail

teachers through a site email system known as LoopMail. The system provides a calendar system for assignment due-dates. Students can also store files in a digital locker for later use (schoolloop.com).

Edline: Edline is a Learning Community Management System (LCMS) that many schools use for school and class organization. It provides district, school and classroom level website support for administrators, parents, teachers and students from kindergarten through 12th grade. Edline is used in many schools aiming to have "paper-less" class and homework, thus cutting costs. The instructor can upload such material as upcoming tests, projects, homework, class expectations, and progress reports. Different schools may upload varying amounts of data and information, depending on teacher preference and school requirements. The product provides instant access to grades and homework assignments.

openSIS: openSIS is one of several free and open source student information system available to K-12 and higher education institutions. The solution has been in development for several years and appears to have much of the functionality that long time commercial versions have today. The solution is a 100% web-based application and has polished looks, a great deal of required functionality and appears to be easy to use based on the online demo website. openSIS is developed and maintained by Open Solutions for Education (Harvey, 2009).

SASI: SASI (Schools Administrative Student Information) or SASI Student Information System is a computer program developed by Pearson School Systems. The *cross-platform* system provides administrators and educators with access to student demographics, attendance, schedules, discipline, grades, extended test histories, and state reporting codes. Features of

SASI include SASIxp, Integrate Pro, classroomXP, and Parent Access. In 2003, more than 16,000 schools nationwide used the software.

Management Information System (MIS) in Nigerian universities is both a process of generating and disseminating information and an operational unit. MIS is a system that optimizes the collection, transfer and presentation of information throughout an organization through an integrated structure of database and information flow. It is, according to Sambo (1992), a system that uses formalized procedures to provide management at all levels and in all functions with appropriate information, based on data from both internal and external sources. In the same vein, Lucy (1989) viewed MIS as a system to convert data from internal and external sources into information and to communicate that information in an appropriate form to management at all levels, to function.

From these definitions, it is clear that MIS effectiveness is predicated on the availability and consequent utilization of some equipment for the transformation of data into information, storing, retrieving and communicating this information to the end - users. These equipments include:

- A. Electronic Equipment such as Computers, Telephone, Telex, Fax, E- Mail and Communications Satellite; and
- B. Printing Equipment such as files and publications (Handbooks, Bulleting, Brochures, etc.).

A few studies have been carried out on MIS in higher educational institutions in Nigeria. These studies (Ekwere, 1990; Mathieson, 1994; Shuaib, 1995) were focused mainly on strategies for designing/developing MIS, thus, stressing the provision, of necessary equipment-In a study of

the evaluation of MIS in Nigerian universities, Ekwere (1990) found out that there was inadequate MIS equipment in the university under study. Likewise, Shuaib (1995) concluded from a study on MIS and planning university education in Nigeria that planning is inadequate in the Nigerian university system due partly to lack of essential MIS equipment.

Specifically, computers and other networking equipment have been emphasized as prerequisites for an effective MIS operation. Robertson, Swann and Newwel (1996) investigated the role of networks in the diffusion of technological innovation. The study revealed that networking equipment are important in ensuring adequate spread of new technologies to end-users. Hazzan (1999) has aptly summarized the importance of these information equipment that without computers, their peripherals and other communications equipment, organizations could not access information offered through world-wide web.

2.5 STUDENT INFORMATION MANAGEMENT

Academic institution is an educational institution dedicated to education and research, which grants academic degrees (Wikipedia retrieved 2012). This definition may well cover the different types of academic institutions, although each type of academic institution offers the same services in varying degrees. The basic types of academic institutions include: Primary Schools, Secondary Schools, and Advanced Educational Institutions. Our interest following there-from is in advanced educational institutions and our focus in this paper is how they manage students' information for the purpose of administering results.

Teaching and research remain the primary activities in higher institutions, but there are other important activities as well, like managing of students' data at the different levels of higher

education (undergraduate, postgraduate, and doctorate levels); tracking of students' progress at each level; as well as other administrative and managerial activities.

In many countries of the developed world, these activities are handled by automation. This, however, is far from being the case in developing countries as evident in Nigeria. 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. Hence, it brings to the fore the need to properly address how these shortcomings (in managing students' data) could be resolved and improved. The solution to these shortcomings lies in an efficient information management system, or simply, information system.

Information systems, simply stated, transform data into useful information. It is an arrangement of people, data, processes, and interface that interact to support and improve day-to-day operations in a business as well as support the problem-solving and decision-making needs of management and users. (Whitten *et.al*, 2001).

A student information system is a software application for education establishment to manage student data (Wikipedia retrieved 2012). Synonyms include Student Information Management System, Student Records System, Student Management System, Campus Management System, or School Management System. These systems encompass a wide range of functions and capabilities, and therefore vary in size, scope, and capability. This could range from systems implemented in relatively small scale to cover students records alone, to enterprise-wide solutions that aims to cover most aspects of running large multicampus organizations with significant local responsibility (Wikipedia retrieved 2012).

Most student information systems in use today are server-based, with the application residing on a central computer server and being accessed by client applications at various places within

and even outside the school (Wikipedia retrieve 2012). Also, according to (Wikipedia retrieve 2012), student information systems have been moving to the web since the late 1990s and that trend is accelerating as institutions replace their older systems. There are several forces that have been driving this evolution of student information systems, and as a result, leading many institutions to replace theirs. These forces are

- Demand for 24/7 web-based access to information by students, teaching staff, and (in primary and secondary education) parents.
- Increasing demands in the amount and frequency of data reporting for accountability and other purposes.
- Importance of integrating student information system with other tools especially relating to instructions, courses and learning.

According to Zhibing *et.al.* (2010) the design and implementation of a comprehensive student information system and user interface is to replace the current paper records. University Staff are able to directly access all aspects of a student's academic progress through a secure, online interface embedded in the school website. The system utilizes user authentication, displaying only information necessary for an individual's duties. Additionally, each sub-system has authentication allowing authorized users to create or update information in that subsystem.

According to Zhi-gang *et.al* (2010) a data flow diagram can also be used for the visualization of Data Processing. Data flow diagram shows the interaction between the system and outside entities. This context-level DFD is then "exploded" to show more detail of the system being modelled. A DFD represents flow of data through a system. Data flow diagrams are commonly used during problem analysis. It views a system as function that transforms the given input into required output.

According to Zhi-gang *et.al.* (2010) student information management system aims to improve the efficiency of college information management, and the main function is managing and maintaining information. The administrator and students are two major functional requirements in the system. The Administrator will be given more powers (enable/disable/ update) than other users. It will be ensured that the information entered is of the correct format. For example name cannot contain numbers. In case if incorrect form of information is added, the user will be asked to fill the information again. Students use the system to query and enter their information only.

2.6 RECENT RELATED WORKS

In the past, information systems of this nature were manually operated, it usually involved high clerical costs, delay in production of required information, reduction in work throughput, and many at times grave errors and/or omissions occur.

Some recent related works aimed at improving the earlier systems reviewed include:

a) Youh (2010) proposed a Client Server Distributed Database for Student Result Processing.

The main highlights in this work include:

- i. It will allow each academic department to maintain its own database and control their data.
- ii. It emphasizes on advantages of distributed system over centralized database system.
- iii. It focuses on improving communication between various departments' local database system in a bid to improve computation of students results.

b) Ayodele and Absalom (2010) proposed a "Design and Implementation of Students Information System for Tertiary Institutions Using Neural Networks": An Open Source Approach. The main highlights in this work include:

- i. It focuses on speeding up collection of students' academic data to expedite processing of results and transcripts at various levels.
 - ii. It would allow online access of results for students.
- c) Idogho, Akpado, and Agajo (2011) proposed an "Interactive Intranet Portal for effective Management in Tertiary Institution" The main highlights in this work include:
- i. Their work addresses the problems arising from result processing, tuition fee payment, and library resources management.
 - ii. As observed from this work, emphasis is on bringing some identified services to the academic community on one platform.
 - iii. Only two of the mentioned services (result processing and library resources management) were discussed in the work and they didn't meet the design expectations as at the time of publication of the paper.
- d) Web portal developed for University of Port Harcourt by Cinfores – a private organization (2012)
- i. The portal offers the following services: Information about the Institution and the various schools, departments, facilities, and other information that needs public view; Account maintenance; Online payments and payment records; Email services; SMS services; and Students Exams and Records Management.
 - ii. The last service is presented as a web application, and it addresses the following tasks: Students' Registration; Academic Course Registration; Tests and Exams scores and records; Students' personal and academic records; Academic course management and allocation; Academic Result approval; and CGPA check.

iii. From the much documented in the Staff User manual, this system does not provide the kind of management information that would be expected for management activities.

iv. The approach adopted for result update is a major concern. These concerns include:

- Possibility of the inbuilt formula in Microsoft Excel file used to collate results broken.

Not much difference from the earlier approach used by the University, except for the fact that the results collated using Microsoft Excel is eventually stored in a database.

- Amount of time taken to manually search through the Excel file to update a score.
- Unnecessary duplication of data as a result of versioning. This leads to wastage of storage.

The proposed system presents an enhanced and efficient means to manage and process students' personal and academic data with a lot of added functionalities. Unlike the reviewed works, this work provides the following benefits:

- Would provide information beyond that required for routine data processing. Such information will support decision-making and managerial activities.
- Would allow generation of the necessary academic documents (Transcripts, Statement of Results, etc.) in a flexible and dynamic manner.

CHAPTER THREE

METHODOLOGY

3.1 Overview of the System

The web based student information system is available for both staff and student of computer science, Federal University Oye-Ekiti. The student information management system is a dynamic web page generation system interface with a number of existing systems, including university student information management system and several administrative systems.

The student information system provides updated and accurate information to both students and staff of the department. Modern IT technologies are used within the system integration and database management to provide as much information as the system can to the end users.

Technical Architecture

Security: Users of the system are issued password, which are intensely managed by the computing administrative staff.

User Environment

The user will be accessing the system via a connection to the Internet. In order to achieve flexible system access and broader range of information at the same time, web based system interface was chosen. However, issues of compatibility between different computer types still exist. Table 3.1 shows the user description which shows the name of the users and their function.

TABLE 3.1: USER DESCRIPTION

NAME	DESCRIPTION
HEAD OF DEPARTMENT	Uses the system to manage coursework results and generate staff workload report, view student details and manage the departmental calendar
ADMINISTRATOR	Use the system to help acceptance, registration process, coursework schedule and timetable updating
LECTURER	Use the system to upload result, give assignment to student and view student that has registered for the course
STUDENT	Use the system via a web browser to access his/her information

Business requirements and System Scope

The following use case diagram shows the types of users and their pursuing activities respectively which is shown in figure 3.1. Activities are placed in different permission zones in order to identify the particular users' privilege of carrying out that activity. Students' use cases are show in fig 3.2:

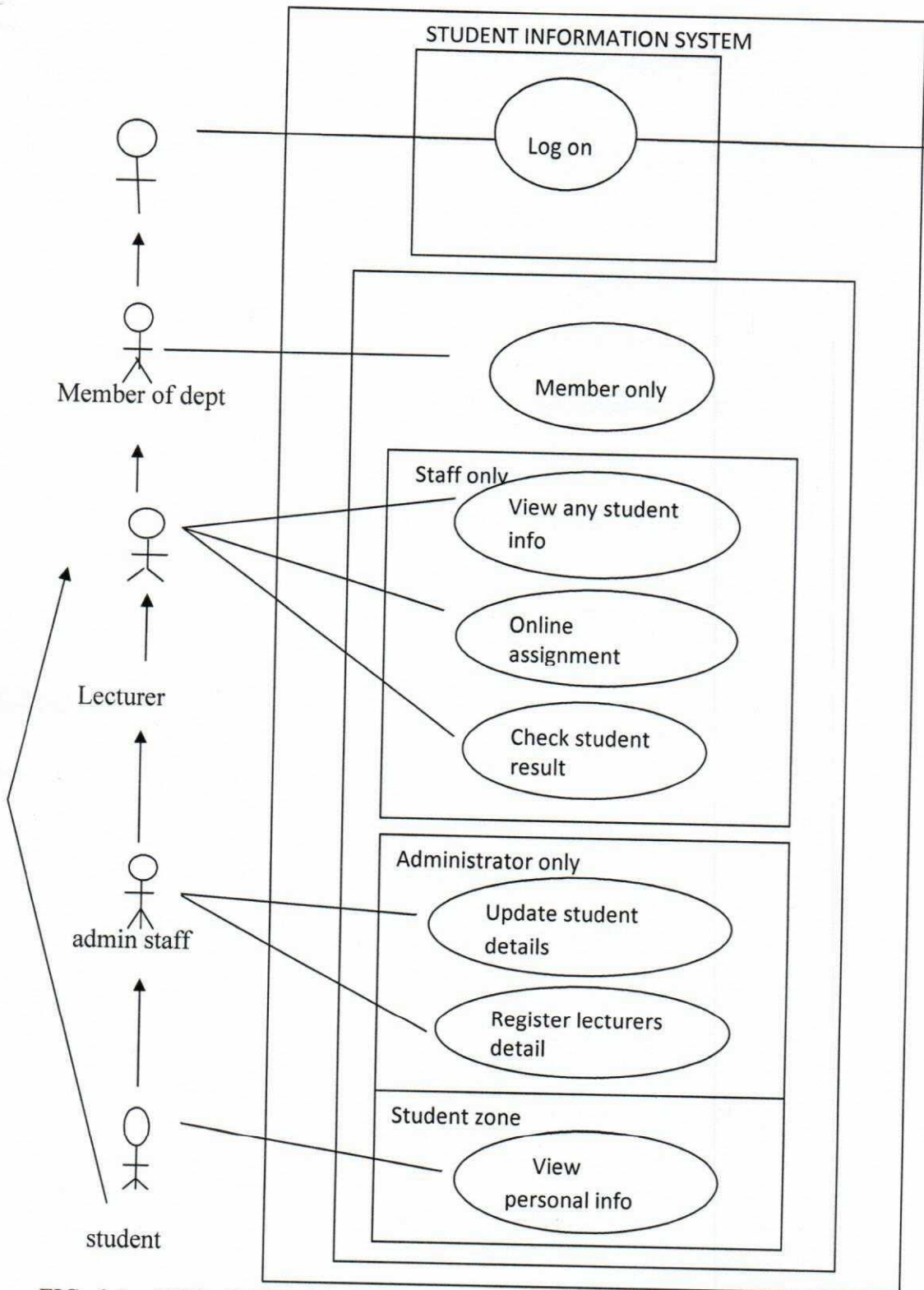


FIG 3.1: USE CASE DIAGRAM FOR STUDENT INFORMATION MANAGEMENT SYSTEM

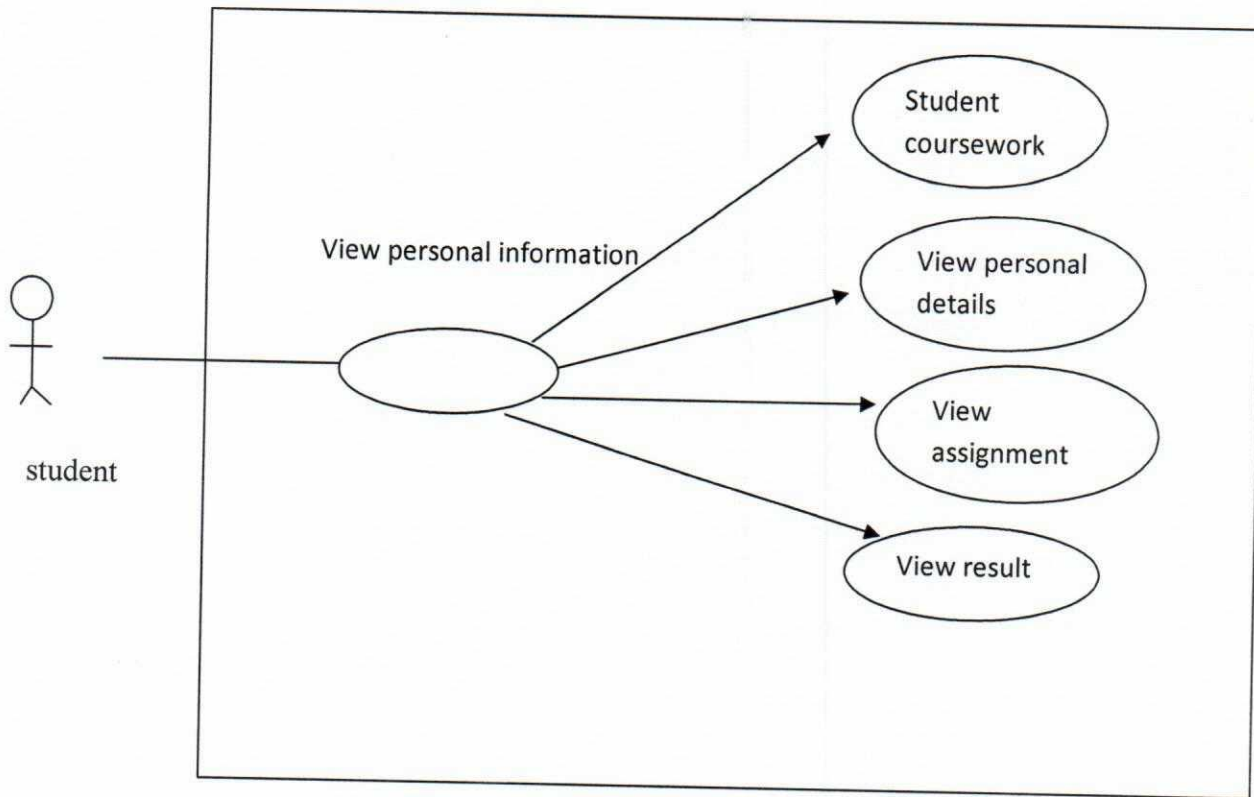


FIG 3.2: DETAILED STUDENT USE CASE DIAGRAM

ENTITY RELATION DIAGRAM

Two levels of system design have been made using models. The first model, logical model, shows what the system is. The two logical models used include data model and process model, respectively.

The identified entities and business assertions for these entities are as discussed below, and a normalized and fully attributed entity-relationship diagram (ERD) representing the data model is as shown in Figure 3.3.

The attributes and entities identified include Faculties; Departments; Degree Courses; Academic Courses; Assigned Academic Courses; Academic Awards; Degree Course Levels;

Degree Course Awards; States; Local Government Areas (LGAs); Students; Users; Academic Sessions; Students Registration; Academic Courses Registration; Next of kin; Address of next of kin.

The business assertions as would be represented in the entity-relationship diagram (ERD) include:

- We need to store data about Faculties. For a Faculty, we need to know the faculty name, faculty code, faculty colour, as well as the Faculty Dean. The value of FacultyID uniquely identifies one and only one Faculty.
- We need to store data about Departments. For a Department, we need to know the faculty, department code, department name, as well as the Head of Department. The value of DeptID uniquely identifies one and only one Department.
- We need to store data about Degree Courses. For a Degree Course, we need to know the department, and degree course name. The value of DegreeID uniquely identifies one and only one Degree Course.
- We need to store data about Academic Courses. For an Academic Course, we need to know the course code, course title, course unit, course semester, course department, and the course description. The value of CourseID uniquely identifies one and only one Academic Course.
- We need to store data about Academic Courses Assigned to Lecturers. For an Assigned Academic Course, we need to know the Academic Session, Lecturer, Academic Course, HOD Result Approval, Faculty Dean Result Approval, and Senate Result Approval. The value of AssignID uniquely identifies one and only one Assigned Academic Course to a Lecturer for a given Academic Session.

- We need to store data about Academic Awards. For an Academic Award, we need to know the award code, award name, and degree type. The value of AwardID uniquely identifies one and only one Academic Award.
- We need to store data about Degree Courses' Levels. For a Degree Course Level, we need to know the degree course, department, degree course level, first semester maximum credit unit, first semester minimum credit unit, second semester maximum credit unit, and second semester minimum credit unit. Also, we need to know the academic adviser. The value of LevelID uniquely identifies one and only one Degree Course Level.
- We need to store data about Degree Courses' Awards. For a Degree Course Award, we need to know the degree course, award code, and award duration. The value of DegAwardID uniquely identifies one and only one Degree Course Award.
- We need to store data about Academic Sessions. For an Academic Session, we need to know the session name and session status. The value of SessionID uniquely identifies one and only one Academic Session. We need to store data about States. For a State, we need to know the State's name. The value of State uniquely identifies one and only one State (of the Federation).
- We need to store data about Local Government Areas. For a Local Government Area, we need to know the State and Local Government's name. The value of LGA uniquely identifies one and only one Local Government Area (of the Federation).
- We need to store data about Students. For a Student, we need to know surname, first name, other names, sex, title, religion, marital status, next of kin and address of the next of kin, date of birth, place of birth, hometown, Local Government Area, State, Nationality, home address, email address, admission year, admission number, degree course, department,

faculty, degree award code, degree award name, degree award type, programme type, programme duration, picture, signature, PIN (Personal Identification Number), Password and graduation status. We also need to know the graduation year. The value of StudentID uniquely identifies one and only one Student.

- We need to store data about Users. For a User, we need to know the user code, user's name, user's department, user's class, user's category, user's password, and user's status. The value of UserID uniquely identifies one and only one User.
- We need to store data about Students Registration. For a Student's Registration, we need to know the student, academic session, study year, degree course level, degree course, first semester maximum credit unit, first semester minimum credit unit, second semester maximum credit unit, and second semester minimum credit unit. We also need to know the registration date. The value of StudentRegID uniquely identifies one and only one Student Registration.
- We need to store data about Academic Courses Registered for each Registered Student, and Scores for each Registered Academic Course for each Registered Student. For an Academic Course Registration, we need to know the student the course is registered for, academic session, semester, academic course, course unit, lecturer in-charge, and if the registered course is a carryover course or not. Also, we need to know the score, grade, and grade point as well as the user that entered or modified the score, date of update/modification, and previous score and grade before the modification. The value of CourseRegID uniquely identifies one and only one Academic Course Registration.

The proposed system would be difficult to fully understand when viewed as a whole (single process) – we need to break down the system into smaller subsystems. This is known as

decomposition. The decomposition diagram is shown in Figure 3.4. The decomposition diagram shows each distinct operation that need to be performed by the system. In some cases, an operation is further broken down to sub-operations that will be performed.

Some operations are dependent on other operations, and therefore cannot be performed until the operations they are dependent upon are performed. For instance, an academic course cannot be assigned to a lecturer if that academic course has not been pre-defined in the system. Furthermore, a student cannot register for an academic course for a given academic session if the academic course has not been assigned to a lecturer for that academic session. By this, Academic Course Registration is dependent on Assign Academic Courses, and Assign Academic Courses is dependent on Academic Course Definition.

The second model, physical model, shows how the system is physically and technically implemented. The output of the physical modeling is the database model which is seen in figure 3.5

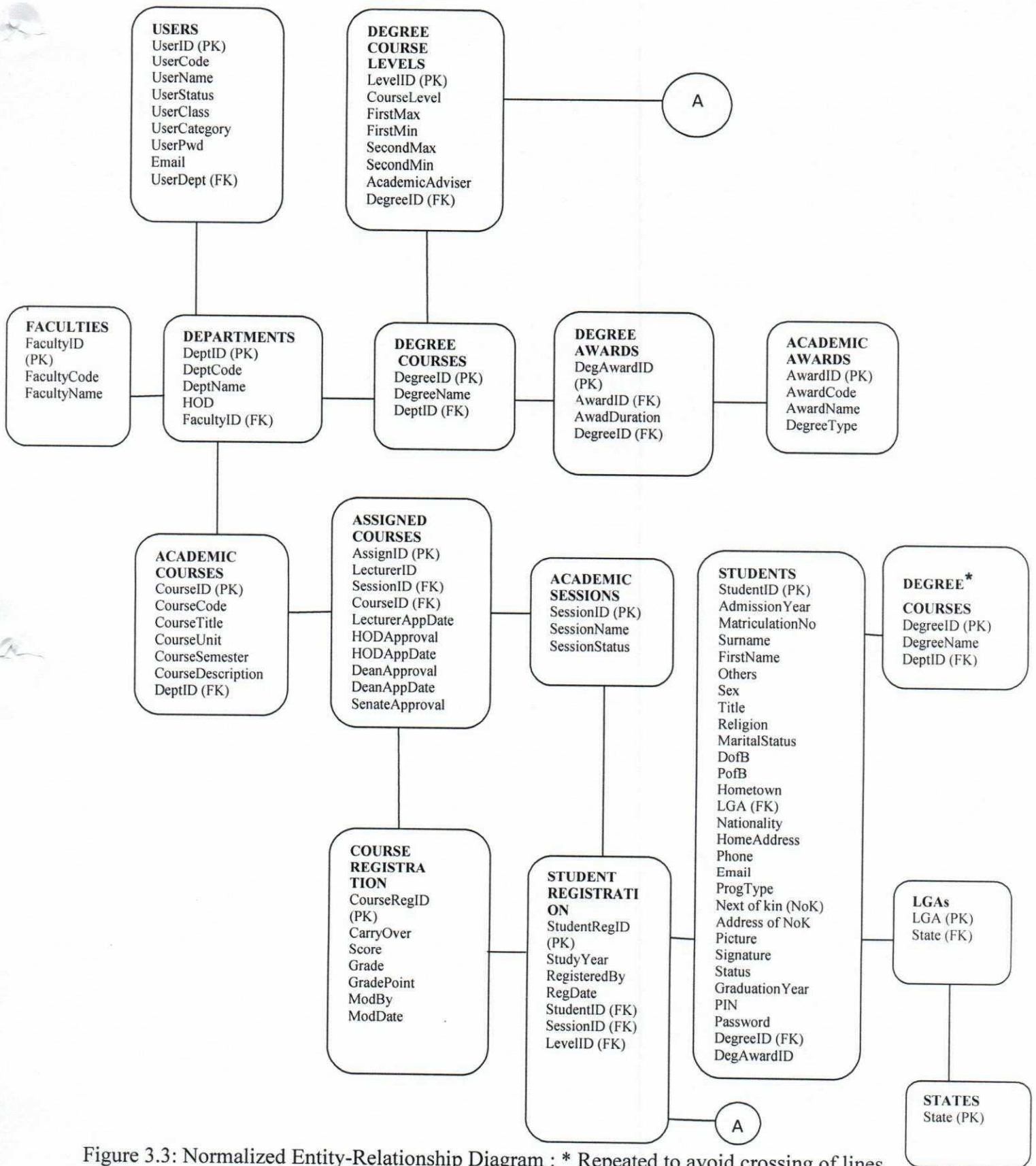


Figure 3.3: Normalized Entity-Relationship Diagram : * Repeated to avoid crossing of lines

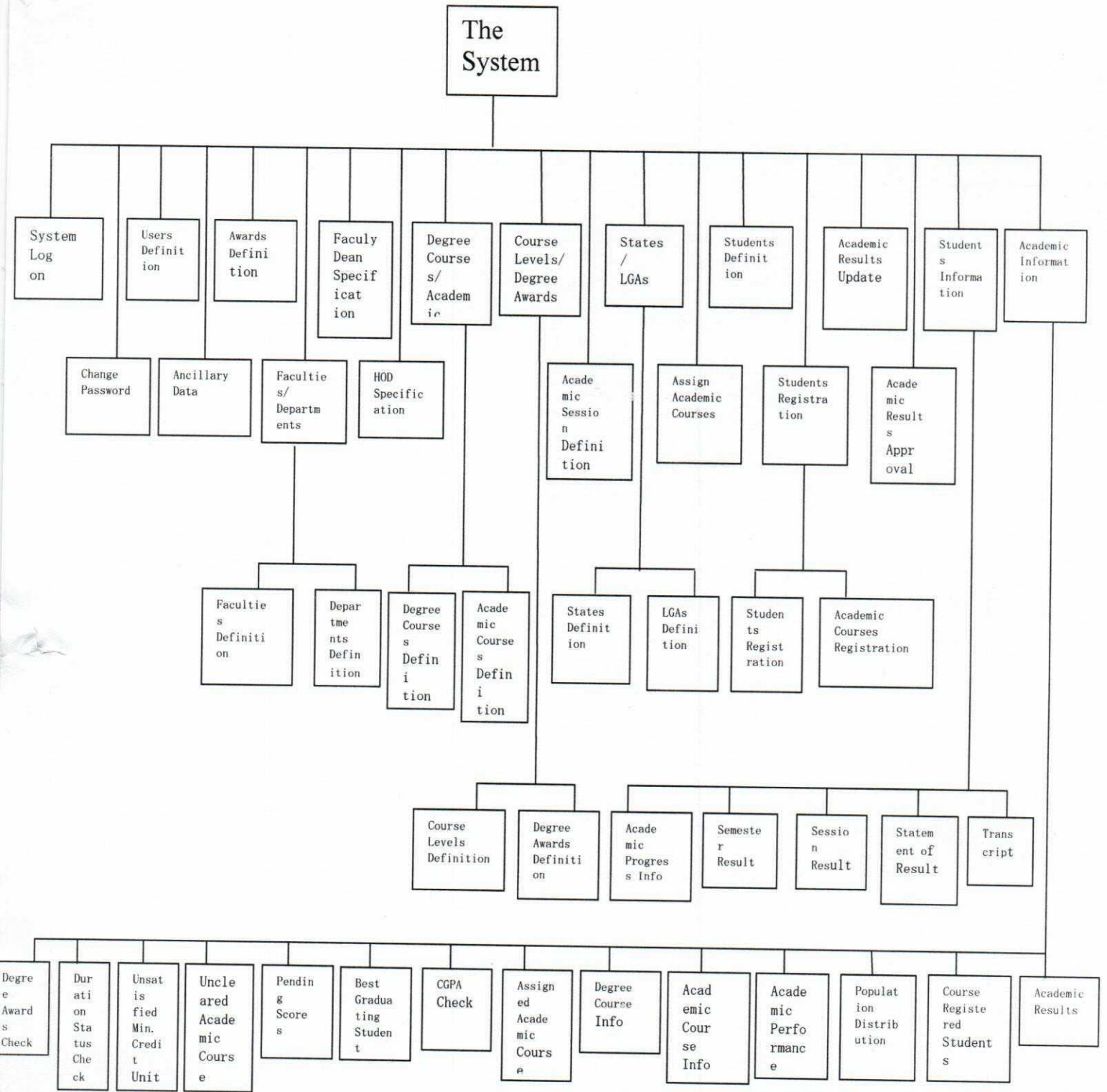


Figure 3.4: Decomposition diagram of the proposed system

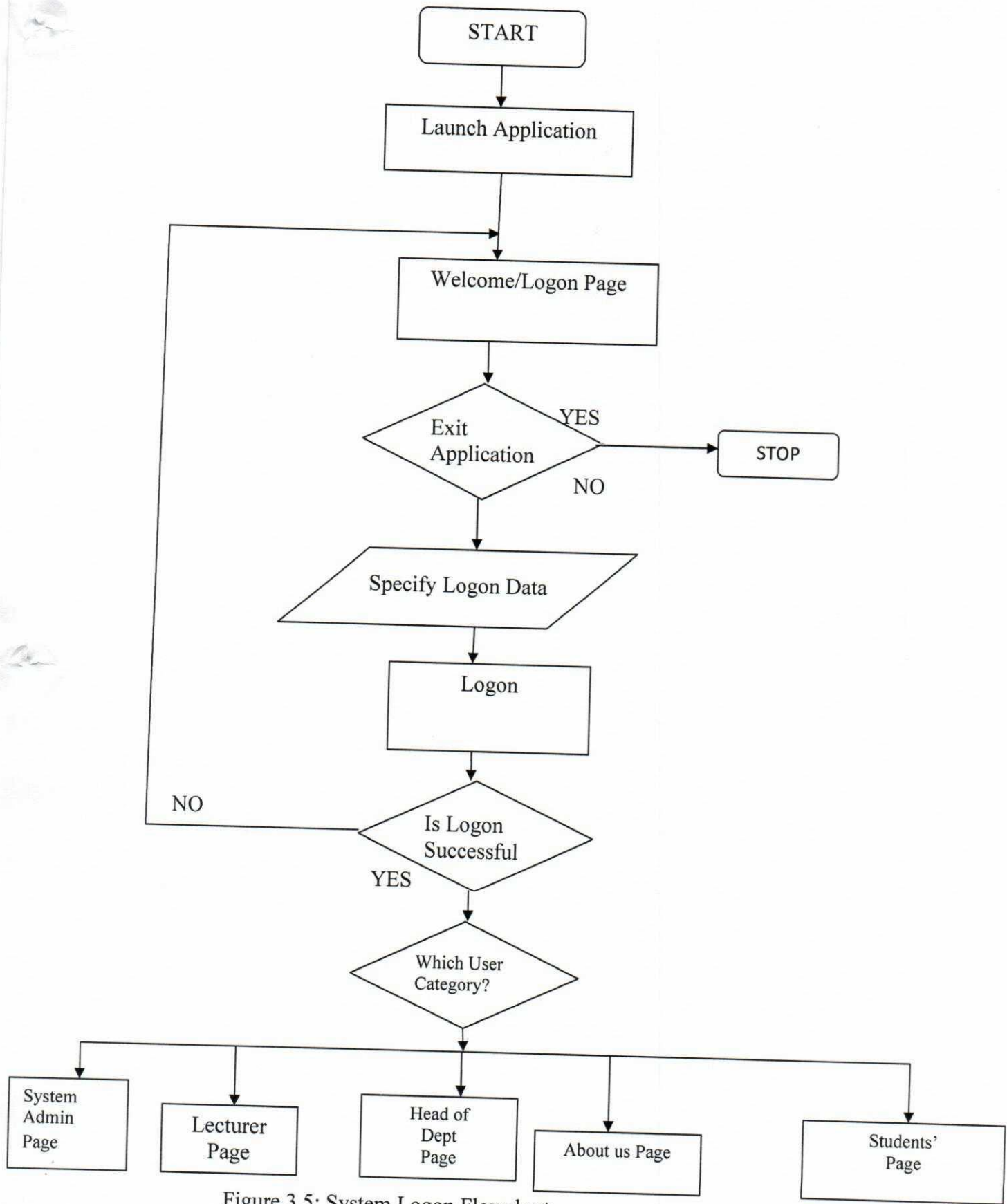


Figure 3.5: System Logon Flowchart

3.2 MODULES IN THE DESIGNED SYSTEM

The design application is segmented into six major modules which carry sub modules in it and all the modules which carry sub modules in it and all the modules are connected to the data base named dbo.

To incorporate the various systems requirement and design, the following design module were mapped out for student information management system.

- Module 1: Admission zone
- Module 2: Student zone
- Module 3: Lecturer zone
- Module 4: HOD zone
- Module 5: Administrator zone
- Module 6: About us

Admission Zone

(a) By accessing admission zone, he has to enter correct scratch card number obtained from the department then user can use the application.

(b) If user makes a mistake while login in, he will be redirected to the login page with 'invalid login' message.

Table 3.2 shows the database table used for the implementation of the admission zone

Table 3.2: Database Table for Admission zone

Field	Type	Type weight
ID	Int	10
PIN	Varchar	30
Studid	Varchar	30
Status	Int	2

Student zone

(a) By accessing student zone, he has to enter correct registration number then user can use the application.

(b) If user makes a mistake while login in, he will be redirected to the login page with 'invalid registration number' message.

Table 3.3 shows the database table used for the implementation of the student zone.

Table 3.3: Database Table for Student zone

Field	Type	Type weight
ID	Int	11
EntID	Varchar	30
Fullname	Varchar	300
Gender	Varchar	10
DOB	Varchar	30

POB	Varchar	300
Nat	Varchar	200
State	Varchar	20
LGA	Varchar	100
AdminsTo	Varchar	10
SchAttend	Text	
GName	Varchar	300
Gphone	Varchar(20)	20
GAddr	Text	
NkName	Varchar(300)	300
NkPhone	Varchar(20)	20
NkAddr	Text	
Geno	Varchar	20
BldGrp	Varchar	20
Des	Varchar	20
Spt	Varchar	50
Hob	Varchar	50
Motspch	Text	
Passp	Varchar	500
RegNo	Varchar	50

Lecturer zone

(a) By accessing lecturer zone, he has to enter correct teacher pass-code then user can use the application.

(b) If user makes a mistake while login in, he will be redirected to the login page with 'invalid registration number' message. Table 3.4 shows the database table for lecturer zone

Table 3.4: Database Table for Lecturer zone

Field	Type	Type weight
ID	Int	11
PassCode	Varchar	50
SQuestion	Varchar	500
SAnswer	Varchar	500
FullName	Varchar	500
TID	Varchar	50
PassP	Varchar	500

HOD zone

(a) By accessing HOD zone, he has to enter correct HOD pass-code then user can use the application.

(b) If user makes a mistake while login in, he will be redirected to the login page with 'invalid registration number' message.

Table 3.5 shows the database table used in the implementation for the HOD zone

Table 3.5: Database table for HOD zone

Field	Type	Type weight
ID	Int	11
Type	Varchar	50
PassCode	Varchar	50

Administrator zone

a) By accessing administrator zone, he has to enter correct administrator pass-code then user can use the application.

(b) If user makes a mistake while login in, he will be redirected to the login page with 'invalid registration number' message.

Table 3.6 shows the database table used in the implementation for the administrator zone.

Table 3.6: Database Table for Administrator zone

Field	Type	Type weight
ID	Int	11
Type	Varchar	50
PassCode	Varchar	50

About us zone

By accessing the about us zone it shows the details about the university.

The system presents a single platform that will be used to manage and process data for all categories of students in the department in a seamless and interactive manner. The design technology that would be adopted for the implementation is a client/server technology using PHP and MYSQL. Apache is used as the Web server.

CHAPTER FOUR

SYSTEM IMPLEMENTATION

System implementation involves integrating the different modules that make up software system to obtain the desired software. The tools that we employed during the implementation of student information management system software include:

- **SQL:** SQL is Structured Query Language, which is a computer language for storing, manipulating and retrieving data stored in relational database.
SQL is the standard language for Relation Database System. All relational database management systems like MySQL, MS Access, Oracle, Sybase, Informix, postgres and SQL Server use SQL as standard database language.
benefit from the common language runtime, type safety, inheritance, and so on.
- **PHP:** PHP is a server-side scripting language that allows your WPHP: Hypertext Preprocessor. Its flexibility and relatively small learning curve (especially for programmers who have a background in C, Java, or Perl) make it one of the most popular scripting languages around. PHP's popularity continues to increase as businesses and individuals everywhere alternative to Microsoft's ASP language and realize that PHP's benefits most certainly outweigh the costs.
- **APACHE:** Apache acts as your Web server. Its main job is to parse any file requested by a browser and display the correct results according to the code within that file. Apache is quite powerful and can accomplish virtually any task that you, as a Webmaster, require.
- **HTML:** HTML is a hypertext markup language which is in reality a backbone of any website. Every website can't be structured without the knowledge of html. If we make

our web page only with the help of html, than we can't add many of the effective features in a web page, for making a web page more effective we use various platforms such as CSS. So here we are using this language to make our web pages more effective as well as efficient. And to make our web pages dynamic we are using Java script.

- **CSS:** CSS Stands for "Cascading Style Sheet." Cascading style sheets are used to format the layout of Web pages. They can be used to define text styles, table sizes, and other aspects of Web pages that previously could only be defined in a page's HTML. The basic purpose of CSS is to separate the content of a web document (written in any markup language) from its presentation (that is written using Cascading Style Sheets). There are lots of benefits that one can extract through CSS like improved content accessibility, better flexibility and moreover, CSS gives a level of control over various presentation characteristics of the document. It also helps in reducing the complexity and helps in saving overall presentation time. CSS gives the option of selecting various style schemes and rules according to the requirements and it also allows the same HTML document to be presented in more than one varying style.
- **JAVA SCRIPT:** JavaScript is considered to be one of the most famous scripting languages of all time. JavaScript, by definition, is a Scripting Language of the World Wide Web. The main usage of JavaScript is to add various Web functionalities, Web form validations, browser detections, creation of cookies and so on. JavaScript is one of the most popular scripting languages and that is why it is supported by almost all web browsers available today like Firefox, We used the browser Opera or Internet Explorer. JavaScript is considered to be one of the most powerful scripting languages in use today. It is often used for the development of client-side web development. JavaScript is used to

make web pages more interactive and dynamic. JavaScript is a light weight programming language and it is embedded directly into the HTML code. JavaScript, as the name suggests, was influenced by many languages, especially Java.

4.1. SOFTWARE REQUIREMENT

The software used for the implementation of this project is:

- An installed package of Wamp server
- An installed package of Dream Weaver
- Browser
- 32 bit processor
- Windows 7

4.2. HARDWARE REQUIREMENT

The hardware used for the implementation of this project is:

- 2GB Ram
- 2Ghz processor

4.3. THE MODULES

The following information describes the design for the different modules. For want of space, only the design of few of the module is given here.

4.3.1 HOMEPAGE

The homepage consist of the admission zone, student zone, lecturer zone, administrator zone, HOD zone and about us. Figure 4.1 shows the print screen of the implemented home zone.

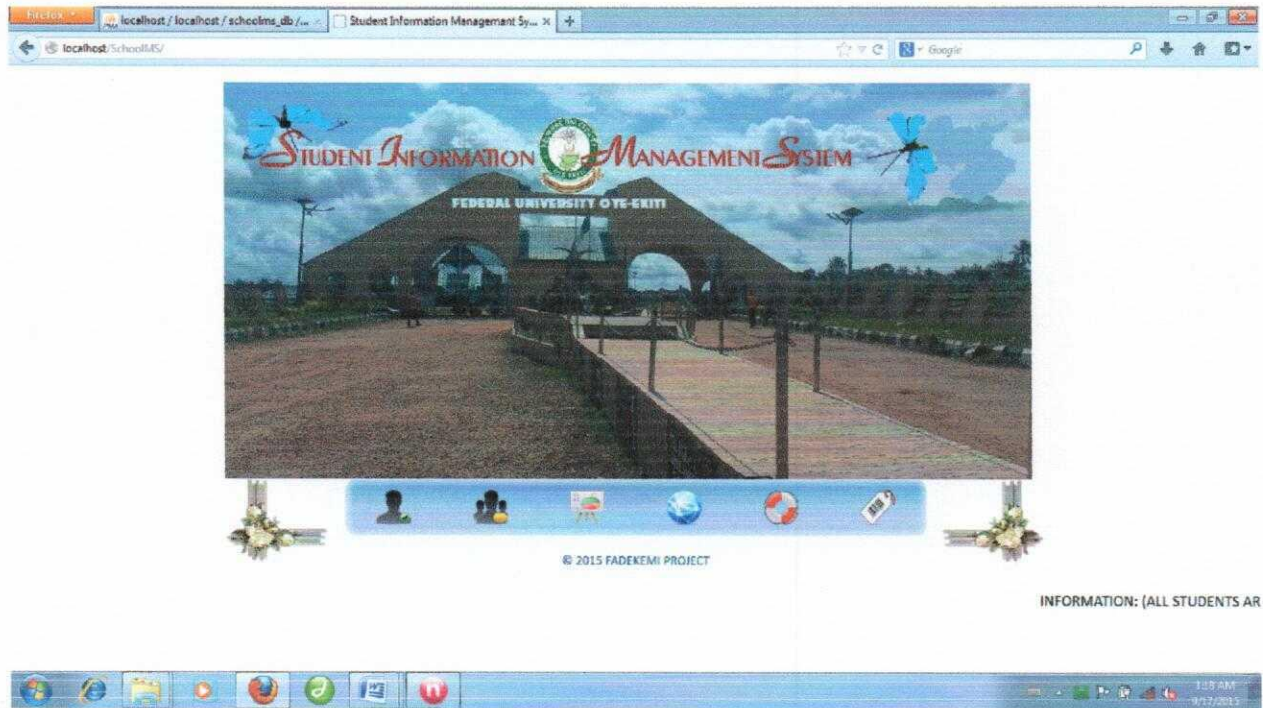


Figure 4.1: Print screen for the homepage

4.3.2 ADMISSION ZONE

From the login, this page can be accessed from the down corner of the page. The page collects the personal and employment information about the employee, it collects input such as name, next of kin, date of birth, gender, medical details of the new student admitted into the department. Figure 4.2 shows the print screen for the admission zone without login. After entering verification code student completes the registration process then administration section will check student details if found correct then administration section will send the mail to email of student that: your Registration has been successful and you can login using the following details: Figure 4.3 shows the print screen of the admission zone after login with details to be filled.

SCRATCH CARD PIN: 1111 OR

SCRATCH CARD PIN: 2222



Fig 4.2: Print screen for admission logon zone

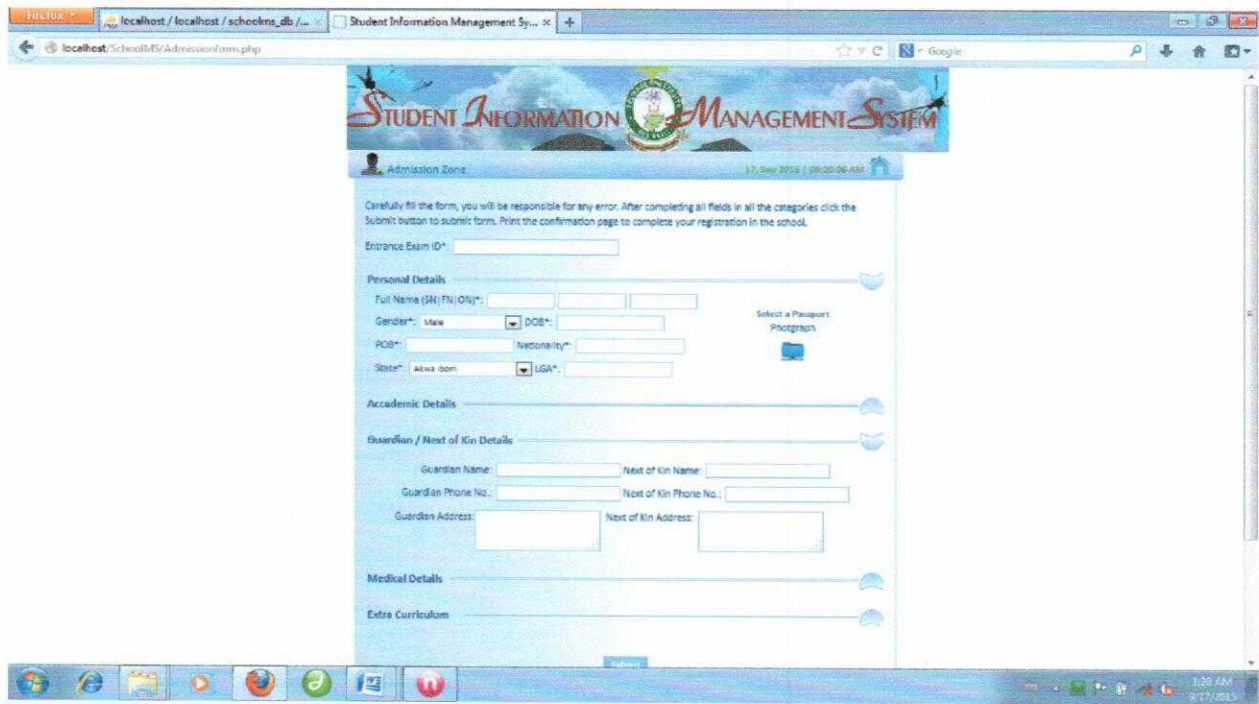


Fig 4.3: Print screen for admission zone details

4.3.3 STUDENT ZONE

It gives information about the student level, semester, check result, assignment and mail. Table 4.4 shows the print screen for the student zone after login with password to the zone.

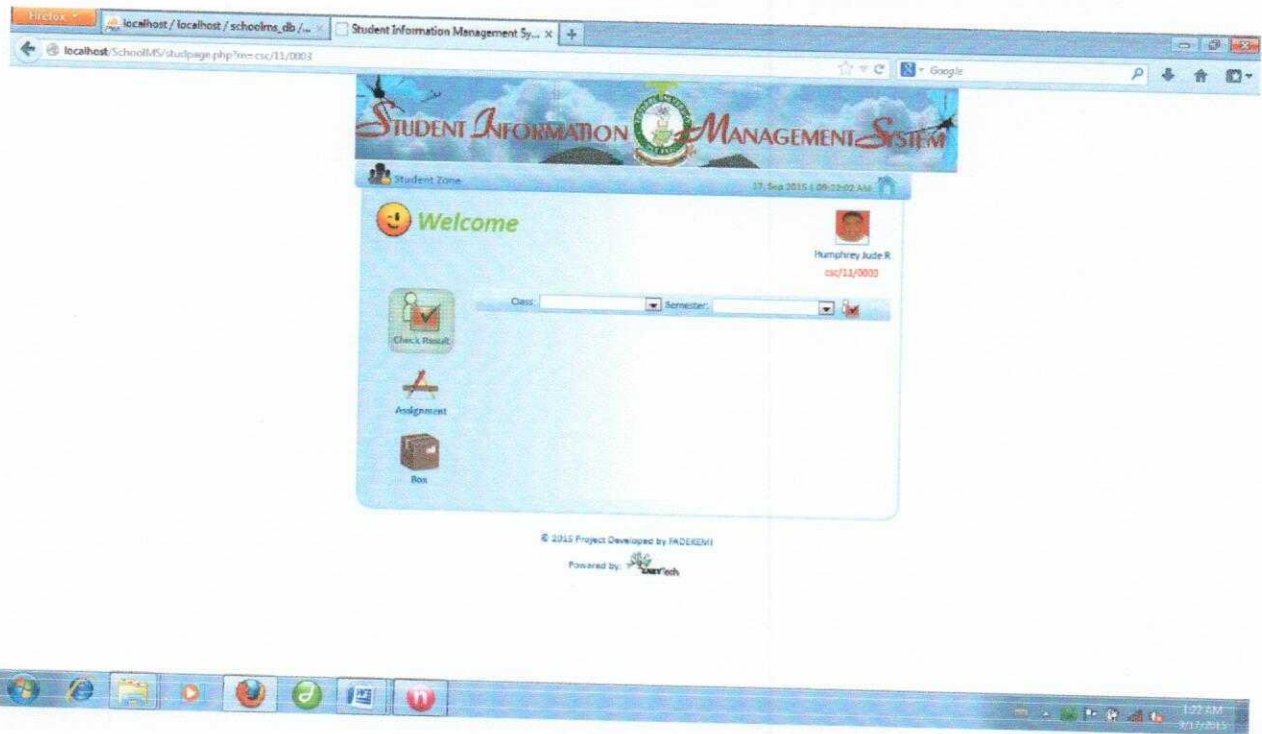


Fig 4.4: Print screen for student zone

4.3.4 LECTURER ZONE

It generate information about the student offering the course, allows lecturer to give assignment and upload result. Figure 4.5 shows the print screen for the lecturer zone after login.

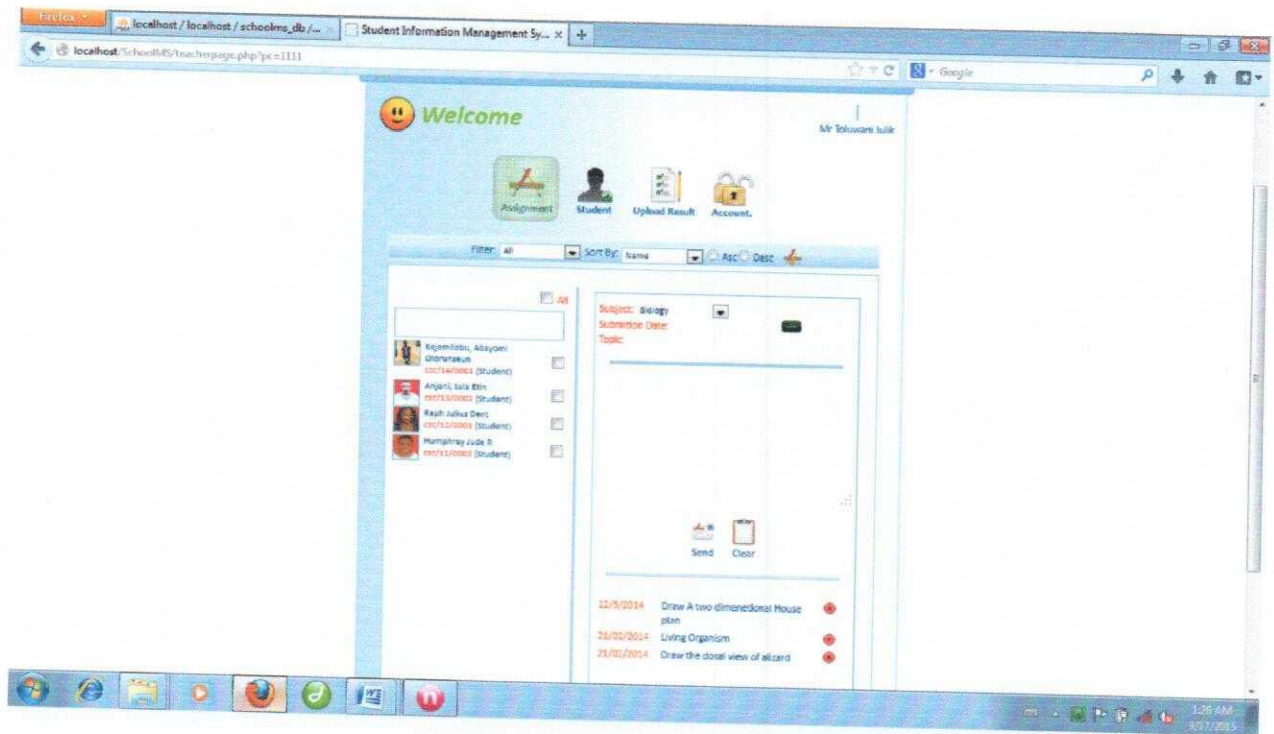


Fig 4.5: Print screen for lecturer zone

4.3.5 HOD ZONE

It generate information about the lecturers in the department, students in the department and calendar of the department. Figure 4.6 shows the print screen for the HOD zone after login.

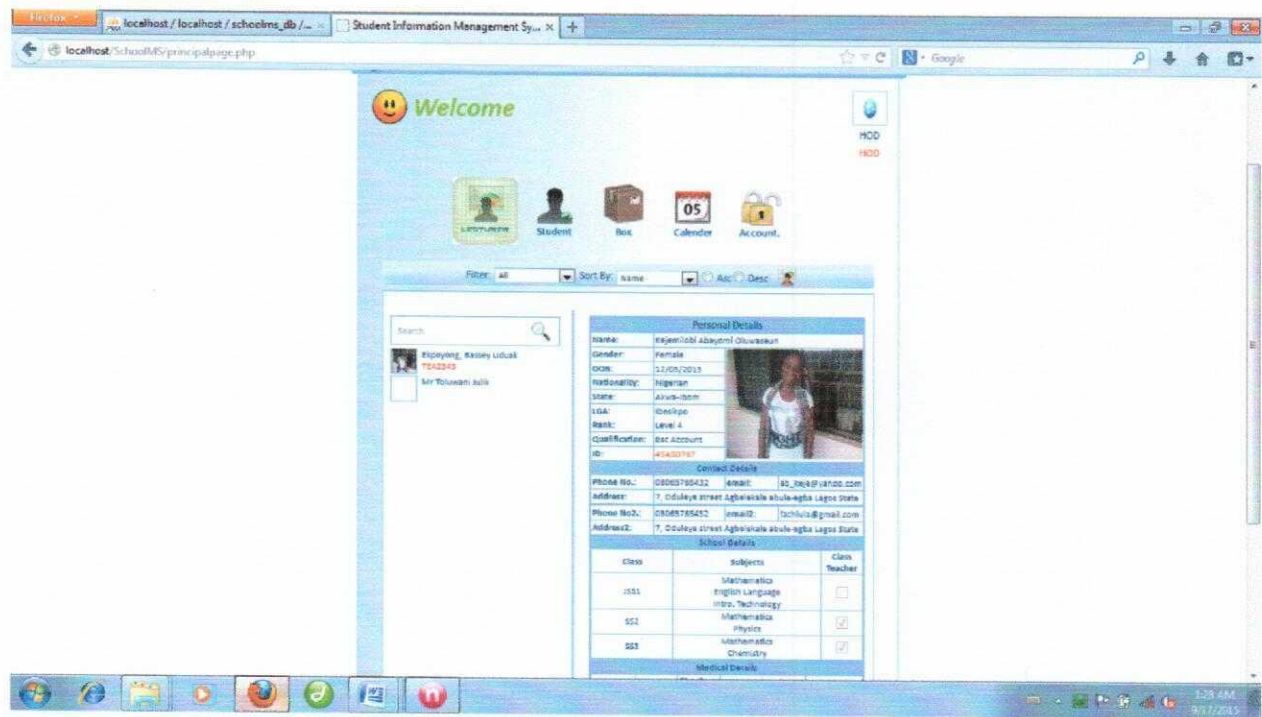


Fig 4.6: Print screen for HOD zone

4.3.6 ADMINISTRATOR ZONE

It registers new lecturers, update lecturers information and student information and it has settings. Figure 4.7 shows the print screen for the administrator zone after login

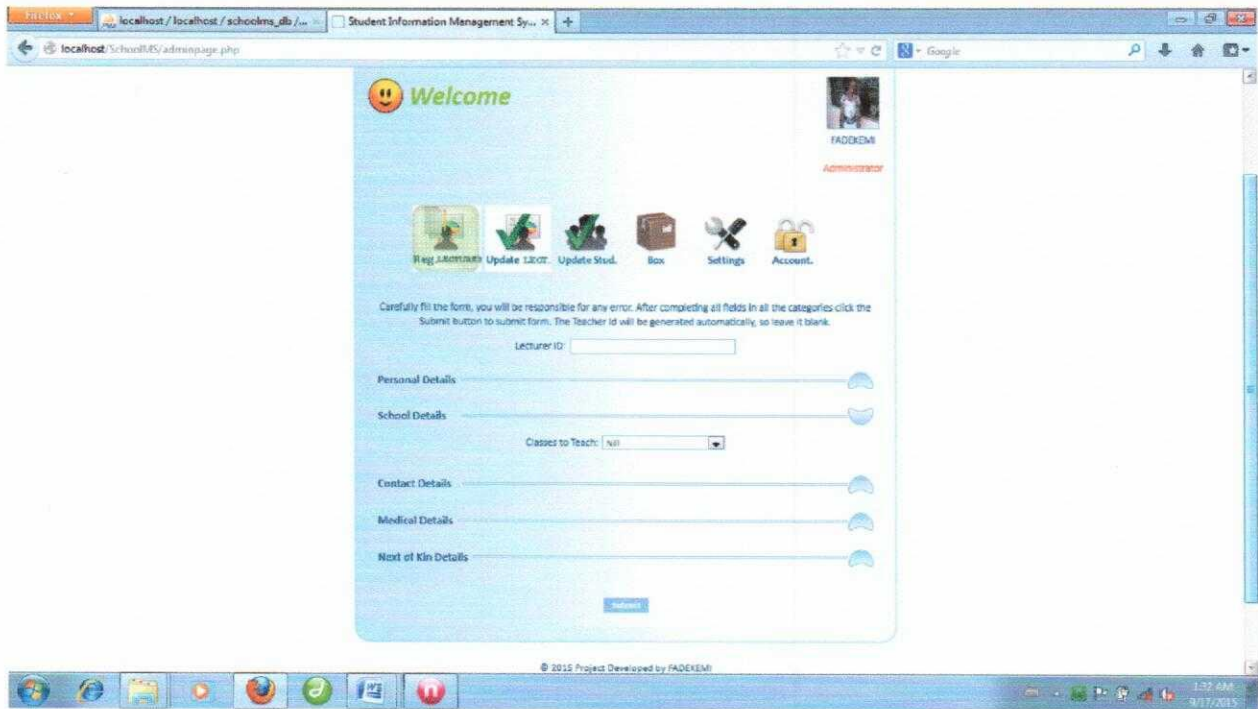


Fig 4.7: Print screen for administrator zone

4.3.7 ABOUT US

It gives information about the university. Figure 4.8 shows the print screen of the about us.

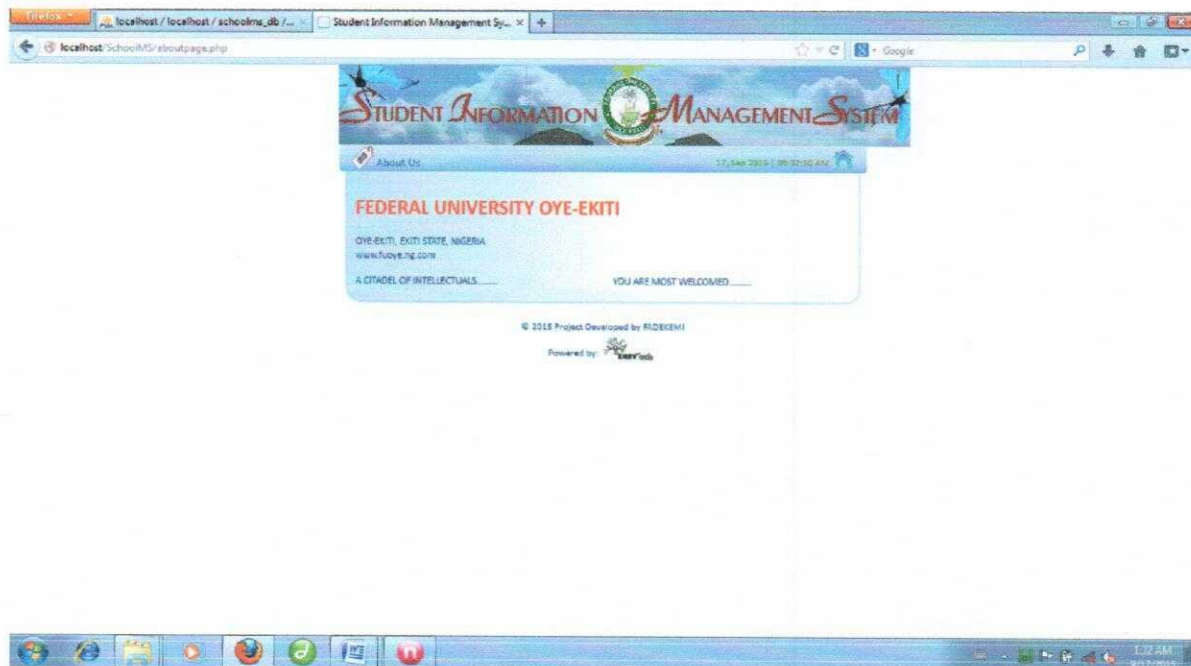


Fig 4.8: Print screen for about us zone

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

CONCLUSION

This project will assist in automating the existing manual system. This is a paperless work. It can be monitored and controlled remotely. It reduces the man power required. It provides accurate information always. Malpractice can be reduced.

All years together gathered information can be saved and can be accessed at any time. The data which is stored in the repository helps in taking intelligent decisions by the management. So it is better to have a Web Based Information Management system. The developed system use PHP as the frontend and MYSQL as the backend during implementation which all the stakeholders, department and management can get the required information without delay. This system is essential in the department. The developed system which has been tested yielded a satisfactory result.

RECOMMENDATION

We presented a departmental information management system. It was developed following Information Science design paradigm, Software Engineering Computer-Human Interaction guidelines. It is a well-designed object oriented application.

The student information management system software will make a big impact on the department's daily operation. It will help improve the efficiency of many operations. The difference in processing time is significant.

There are many things we will be able to do now with the system that we could not do before.

Although the software is a customized information management system for the Department of Computer Science at Federal University Oye Ekiti, it can be easily configured to be used by other academic departments in the institution. Also, we can extend the software to support much larger user groups e.g., an academic college or even the whole university. To realise this however, there is a need to carry out activities such as Data test, User acceptance testing, System Review and Deployment and there is still need for further research on this work for it to be able to compute results for the department to reduce mistakes in computation of result and loss of results.

REFERENCES

- Anigbogu G. (2000). *Systematic planning for educational change*. California: Mayfield publishing company.
- Ayodele O.A. and Absalom E.E. (2010). "Design and Implementation of Students' Information System for Tertiary Institutions using Neural Networks: An Open Source Approach", *International Journal of Green Computing*, Vol. 1, No. 1, pp. 1-15.
- Barrett, S. (1999). Informations systems: an exploration of factors influencing effective use. *Journal of Research on Computing in Education*, Vol 1, No 32, pp. 4-16.
- Bernhardt, V.L. (2006). Using data to improve student learning in school districts. *Eye on Education, Inc.* Larchmont, NY.
- Bonig R. (2012). "Latest Trends in Student Information Systems: Driven by Competition", *Educause Review*, Vol. 47, No. 3, pp. 56-57.
- Bird, K. (2006). Student information systems: How do you spell parental involvement? s-i-s *T.H.E. Journal*, 0192592X, 20060201, Vol. 33, Issue 7. Retrieved November 22, 2009 from ERIC Database.
- Career and Technical Education Reporting. (2009). Ncwise: north carolina window of information on student education. Retrieved 2009 from <http://www.ncwise.org/newsletter2.html> .
- Chapman J. R., "Software Development Methodology a.k.a System Development Life Cycle", Available at http://www.hyperthot.com/pm_sdm.htm Retrieved 05.06.2012
- Chimezie F. (2000). "Use of local area network in school. ERIC Digest" Syracuse, NY: ERIC Clearinghouse on information resources.

- Clifton E.B. (1983). *Management of records in Nigerian Universities*. Problems and prospect. The flectional library Vol 23 pp 30.
- Cynthia Harvey (2009). "Open Source Apps Transforming Education" Datamation. Retrieved 2013-06-27.
- Enwere J.C. (1992). *Records managements in Nigeria: to be or not to be? Nigeria library or information science review*. Lagos, Nigeria: Akin publishing ltd.
- Feldman, J., & Tung, R. (2001). Using data-based inquiry and decision making to improve instruction. *ERS Spectrum Vol 19*, No 3, pp 10-19.
- Funk M. (1980). *Perspective in education planning* . Ibadan, Nigeria Odun prints and pack, Agbowo
- Hewlett M. (1993). *The internet in education column: *special issue+*. "internet world".
- Idogho O.P., Akpado K., and Agajo J. (2011). "Interactive Intranet Portal for Effective Management in Tertiary Institution", *International Journal of Advanced Computer Science and Applications*, Vol. 2, No. 6, pp. 122-129.
- Iwhiwhu E.B (2005). *The future of records management in Nigeria*. The Nigerian archivist. Journal of the society of Nigeria archivist, Vol 1, pp 2&3.
- Kumar, Kamal S. (2000) "*Higher Education: A Lesson in Mainframe Server Automation*" NYC Department of Education.
- Lucey I. (1991). *Managing record in the Modern office*. Training the wild frontier. Archivaria, pp 39 (spring).
- Khan A. I., Quarashi R. J., and Khan U. A. (2011). "A Comprehensive Study of Commonly Practiced Heavy and Light Weight Software Methodologies", *International Journal of Computer Science Issues*, Vol. 8, Issue 4, No. 2, pp.24

- National center for Education Statistics (2000). "Building an automated student record system", *Office of Educational Research and Improvement*, U.S. Department of Education. NCES 2000 pp 324
- Nwankwo J.I.(1982). *Establishment of information in sind| province*, UNESCO technical report: project PAK|77|038. 44
- Norasiah M.A. and Norhayati A. (2003) "Intelligent student information system". 4th International conference on telecommunication technology proceedings, Shah Alam, Malaysia, 0-7803-7773-7/03 2003 IEEE.
- Nwachukwu E.O. (1998). *Information Systems Development – A Structured Approach*, Genesis Concepts, Owerri, Nigeria, pp. 34-36.
- Obilikwu N.(1995). *Records management project Ibadan*, Nigeria. Adeyomi printing press
- Omenyi A.S.(1997). *Effective record management: a tool for effective counselling in the school system*. Journal of counselling and communication.
- Oketunji S.F.(2002). *Information provision to academic research and development organization in the 21st century*. The information manager 2 (1)
- Popoola S.O. (2000). *Records management program in Nigeria: a survey of the Osun state civil service*.
- Pienaar H. (2003). "Design and Development of an Academic Portal", *Libri*, Vol. 53, pp. 118 – 129.
- Sorensen R., "A Comparison of Software Development Methodologies" Available At sorensen@software.hill.af.mil Retrieved: 09-07-2012

- Taylor M. (1980). *Education and training achieve and records manager in the Africa*. Ibadan, Nigeria: Odun publishing company.
- Uju J.O. (1997). *Research methods application of scientific research methodology and documentation*, Trans-Ekulu Enugu Joen Publishers.
- Wayman, J.C (2005). "Involving teachers in data-driven decision making: using computer data systems to support teacher inquiry and reflection", *Journal for Education of student placed at risk*. Vol 10, No 1, pp 3
- Whitten J.L., Bentley L.D., and Dittman K.C. (2001). *Systems Analysis and Design Methods*, Irvin/McGraw Hill, New York.
- Youh D.X. (2010). "Design and Implementation of a Client Server Distributed Database for Student Results Processing", *The Pacific Journal of Science and Technology*, Vol. 11, No. 2, pp. 288-295.
- Zhi-gang YUE, You-wei JIN, (2010) "The development and design of the student management system based on the network environment", International Conference on Multimedia Communications, 978-0-7695-4136-5/10 2010.
- Zhibing Liu, Huixia Wang, Hui Zan (2010) "Design and implementation of student information management system." International symposium on intelligence information processing and trusted computing. 978-0-7695-4196-9

APPENDIX

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Student Information Managemant System</title>
<script type="text/javascript" src="taqua.jl.js"></script>
<script type="text/javascript" src="taquaAjax.js"></script>
<link href="css/css.css" rel="stylesheet" type="text/css" />
</head>
<?php $mnuEvent = "onmouseover=\"X = event.clientX; Y =
event.clientY;SE(this,60,20,\"SetLoc(X,Y,' + this.id + ')\"
onmouseout=\"SE(this,42,20,\"ClearInfoBx()\""; ?>
<body <?php if(isset($_GET['nm']) && isset($_GET['rn']))){echo
"onload=\"showRegRst(\"".$_GET['nm'].\"\",\"".$_GET['rn'].\"")\"";} ?>>
<div id="loaderPage" >

<div id="txtLoad" >Verifying PIN ..</div>

</div>
<div id="Container">
<!--Banner-->
```

```
<div id="Banner">
  
</div>
```

```
<!--Left Flower-->
<div style="width:146px; height:auto; float:left">
  
</div>
```

```
<!-- Menu Box-->
<!--<div style="position:absolute; width:706px; height:44px;
background:url(images/infoboxpic.png) no-repeat"></div>-->
<div style="width:708px; float:left">
  <script type="text/javascript" >
/* function ScaleIten(ID){
var elem = _(ID);
var W = elem.style.width;
var elemW = Number(W.substr(0,W.length - 2));
alert(elemW);
//document.getElementById("").style.marginBottom
}*/
var showRegRst = function(nm,rn){
alert(nm + " , Registered Successfull \n" + "Registration Number: " + rn);
```

```
}
```

```
var CheckPIN = new function(){  
this.Ajax = new TaquaAjax;  
this.Check = function(pin){  
SH('loaderPage',1);  
_('txtLoad').innerHTML = "Verifying PIN ...";  
var ajaxpg = "checkPin.php";  
var pstdata = "pin="+escape(pin);  
CheckPIN.Ajax.PostResponse(pstdata,ajaxpg,CheckPIN.HandlePin,"text",CheckPIN.HandleEr  
r);  
}  
  
this.HandlePin = function(res){  
SH('loaderPage',0);  
if(res == "#")  
{  
document.location = 'Admissionform.php';  
  
}else
```



```
{  
alert("Invalid PIN or the PIN has been used by another Student");  
}  
}
```

```
this.HandleErr = function(res){
```

```
SH('loaderPage',0);
```

```
alert(res)
```

```
}
```

```
//student login
```

```
this.CheckReg = function(reg){
```

```
SH('loaderPage',1);
```

```
_( 'txtLoad').innerHTML = "Verifying Registration Number ...";
```

```
var ajaxpg = "checkPin.php";

CheckPIN.regNo = reg;

var pstdata = "reg="+escape(reg);

CheckPIN.Ajax.PostResponse(pstdata,ajaxpg,CheckPIN.HandleReg,"text",CheckPIN.HandleE
rrReg);

}

this.HandleReg = function(res){

SH('loaderPage',0);

if(res == "#"){

document.location = 'studpage.php?rn='+escape(CheckPIN.regNo);
}

else

{

alert("Invalid Registration Number");

}
```

```

    }

    this.HandleErrReg = function(res)
    {
        SH('loaderPage',0);
        alert(res)
    }

    //student login

    this.CheckTeacher = function(PassCode){
        SH('loaderPage',1);
        _('txtLoad').innerHTML = "Verifying Pass-Code ...";
        var ajaxpg = "checkPin.php";
        CheckPIN.TPassCode = PassCode;
        var pstdata = "TPassCode="+escape(PassCode);
        CheckPIN.Ajax.PostResponse(pstdata,ajaxpg,CheckPIN.HandleT,"text",CheckPIN.HandleErr
        T);
    }

    this.HandleT = function(res){
        SH('loaderPage',0);
        if(res == "#"){
            document.location = 'teacherpage.php?pc='+escape(CheckPIN.TPassCode);
        }else{
            alert("Invalid Pass-Code");
        }
    }

```

```

    }
    this.HandleErrT = function(res){
    SH('loaderPage',0);
    principallert(res)
    }
    //check Principal
    this.CheckPrinc = function(PassCode){
    SH('loaderPage',1);
    _('txtLoad').innerHTML = "Verifying Pass-Code ...";
    var ajaxpg = "checkPin.php";
    // CheckPIN.PPassCode = PassCode;
    var pstdata = "PPassCode="+escape(PassCode);
    CheckPIN.Ajax.PostResponse(pstdata,ajaxpg,CheckPIN.HandleP,"text",CheckPIN.HandleErr
    P);
    }
    this.HandleP = function(res){
    SH('loaderPage',0);
    if(res == "#"){
    document.location = 'principalpage.php';
    }
    Else
    {
    alert("Invalid Pass-Code");

```

```
}  
    }  
    this.HandleErrP = function(res){  
    SH('loaderPage',0);  
    alert(res)  
    }  
    }  
    //function open page  
    function CheckLoadPage(OBJ){  
    //alert(OBJ.src);  
    if (_('inputbxHeader').innerHTML == 'Scratch Card PIN: '){  
    if(trim(_('inputfield').value) != ""){  
    CheckPIN.Check(_('inputfield').value);  
    }  
    /*document.location = 'Admissionform.php';*/  
    }  
    else if (_('inputbxHeader').innerHTML == 'Student Registration Number: '){  
    {  
    if(trim(_('inputfield').value) != ""){  
    CheckPIN.CheckReg(_('inputfield').value);  
    }  
    //document.location = 'studpage.php';
```

```

}
else if(_('inputbxHeader').innerHTML == 'Teacher Pass-code: ')
{
    if(trim(_('inputfield').value) != ""){
        CheckPIN.CheckTeacher(_('inputfield').value);
    }
    }else if(_('inputbxHeader').innerHTML == 'HOD Pass-code: '){
        if(trim(_('inputfield').value) != ""){
            CheckPIN.CheckPrinc(_('inputfield').value);
        }
    }else if(_('inputbxHeader').innerHTML == 'Administrator Pass-code: ')
    {
        document.location = 'adminpage.php';
    }
Else
{
}
}

//Display the input box base on the menu clicked
function DisplayInput(mnu,headerText)
{
    //alert('gg');
    _('inputbxHeader').innerHTML = headerText;
}

```

```
CSrc('inputboxImg',mnu.src);
_('inputfield').value = "";
//_('inputbx').style.display = 'block';
if (window.ActiveXObject){// IE dont fade
SH('inputbx',1)
}
Else
{
FE('inputbx','in',40,'SO(0,\inputbx\');SH(\inputbx\,1);','");
}

// alert(window.scrollMaxX);
_('inputbx').scrollIntoView();
_('inputfield').focus();
}

//load and display the info box
function SetLoc(X,Y,mnu){
var inhtml = "";

if (mnu == 1)
{
```

```

inhtml = '<div style=\"font-size:1.3em; font-weight:bold;border-bottom:#006 solid
thin;\">Admission Zone</div><div style=\"padding-left:10px; font-size:0.72em\">Register
Student<br />* Personal details<br />* Academic details<br />* Guidians / Nest of Kin<br
/>etc.</div>';

}

else if(mnu == 2){

='<divstyle=\"fontsize:1.3em;fontweight:bold;borderbottom:#006solidthin;\">StudentZone</di
v><divstyle=\"paddingleft:10px;fontsize:0.72em\">*Checkresult<br/>*Viewassignment<br/>*
Send/Recieveinformations<br />etc.</div>';

}

else if(mnu == 3)

{

='<divstyle=\"fontsize:1.3em;fontweight:bold;borderbottom:#006solidthin;\">LecturersZone</
div><divstyle=\"paddingleft:10px;fontsize:0.72em\">*Checkstudentresult<br/>*Viewstudent<
br/>*Loadassignment<br />* Send/Recieve info.<br />etc.</div>';

}

else if(mnu == 4)

{

='<divstyle=\"fontsize:1.3em;fontweight:bold;borderbottom:#006solidthin;\">H.O.DZone</div
><divstyle=\"paddingleft:10px;fontsize:0.72em\">*Managepermission<br/>*Viewstudentresul
t<br/>*Viewstudent details<br />* Send/Recieve info.<br />etc.</div>';

}

```



```

else if(mnu == 5)
{
size:0.72em\">*Registerlecturers<br/>*Editstudentdetails<br/>*Edit University details<br />*
General settings<br />etc.</div>';
}
Else
{
AccademicFacilities<br/>*Goals and Objectives<br />etc.</div>';
}
var elem = _("infobox");
elem.innerHTML = inhtml;
//set location
elem.style.left = (X + 10) + 'px';
iebody = (document.compatMode && document.compatMode != "BackConpat")?
document.documentElement : document.body;
var winscroll = (typeof(window.scrollY) == 'undefined')? iebody.scrollTop : window.scrollY;
elem.style.top = ((Y - 10 + winscroll) - RV(elem.style.height)) + 'px';
//alert(document.body.scrollTop);
//set visibility
if(!window.ActiveXObject){// not IE fade
SO(0,'infobox');
elem.style.display = 'block';
//set opacity using Fade Effect

```

```

FE('infobox','in',20,"");
}else{
elem.style.display = 'block';
}
}

//close info box

function ClearInfoBx(){
// var elem = _("infobox");
if(window.ActiveXObject){ //IE dont fade
_('infobox').style.display = 'none';
}else{
FE('infobox','out',20,"'_('infobox\').style.display = \'none\'");
}
}

</script>

<!--Menus-->

<div style="width:708px; background:url(images/menuHeaderempty.png); height:70px">
<table cellpadding="0" cellspacing="0">
<tr style="cursor:pointer">
<td>
 onclick="DisplayInput(this,'Scratch Card PIN:
```

```
)" id="1" />
```

```
</td>
```

```
<td>
```

```
 onclick="DisplayInput(this,'Student Registration Number: ')" id="2"/>
```

```
</td>
```

```
<td>
```

```
 onclick="DisplayInput(this,'Teacher Pass-code: ')" id="3" />
```

```
</td>
```

```
<td>
```

```
 onclick="DisplayInput(this,'HOD Pass-code: ')" id="4" />
```

```
</td>
```

```
<td>
```

```
 onclick="DisplayInput(this,'Administrator Pass-code: ')" id="5"/>
```

```
</td>
```

```
<td >
```

```
 onclick="document.location='aboutpage.php'" id="6"/>
```

```
</td>
```

```
</tr>
```

```
</table>
```

```
</div>
```

```
<!--Infobox-->
```

```
<div style="background: url(images/infoboxpic.png) no-repeat; width:203px; height:97px; position:absolute; display:none; padding:4px; color: #003" id="infobox">
```

```
</div>
```

```
<div>
```

```
<!--Input div-->
```

```
<div style="width:275px; height:72px; background:url(images/inputbox.png) no-repeat; margin:auto; display:none;" id="inputbx" >
```

```
<!--Title-->
```

```

<div style="font-family:'Gill Sans MT Condensed', Calibri, Verdana, Candara; font-
size:1.03em; padding-left:10px" id="inputbxHeader"></div>
<!--Input-->
<div>
<div class="RoundGradient" style="height:33px; width:248px; margin-left:8px">
<table cellpadding="0" cellspacing="2">
<tr>
<td width="30" style="margin-right:5px"></td>
<td width="180"><input type="password" name="logintxt" id="inputfield"
style="background-color: ; width:172px" class="RoundGradient" /></td>
<td width="10"></td>
</tr>
</table>
</div>
</div>
</div>
</div>
<br />
<div style="text-align:center">&copy; 2015 FADEKEMI PROJECT</div>

```

```
<br />
</div>
<!--right Flower-->
<div style="width:146px; height:auto; float:right">
  
</div>
<div style="clear:both"></div>
</div>
<br />
<div><marquee behavior="slide" direction="left" style="font-size:1.2em; color:Black;"
loop="100">
  INFORMATION: (ALL STUDENTS ARE EXPECTED TO REGISTER THEIR
INFORMATION HERE BEFORE 2015/2016 SESSION) &nbsp; &nbsp; &nbsp; &nbsp; ..... (ALL
LECTURERS AND NON TEACHING STAFFS ARE ALSO EXPECTED TO REGISTER
THERE INFORMATION HERE) &nbsp; &nbsp; &nbsp; &nbsp; &nbsp;..... (LECTURERS SHOULD
NOT FORGET TO LOAD STUDENT RESULTS HERE AFTER EACH SEMESTER).
THANKS (MANAGEMENT)
</marquee></div>
<br />
</body>
</html>
```