**DESIGN AND IMPLEMENTATION OF A STUDENT RECORD MANAGEMENT SYSTEM**

**(A CASE STUDY OF DEPARTMENT OF COMPUTER SCIENCE, OGITECH)**

**SUBMITTED BY**

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**ABSTRACT**

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. This paper discusses the design and implementation of a student registration and course management database application with Microsoft Visual studio as the compiler and Microsoft access as the database.

**Key words:** Database, keys, query, relation, records, tables

**CHAPTER ONE  
INTRODUCTION**

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 e.g. 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. As noted in Vecchioli (1999) organizing and managing student records into a cohesive and efficient system might seem like an impossible task. A system, with numerous definitions can be literally seen in a computer way as a collection of the hardware and software components of a computer. According to Stella C. Chiemeke and Franca A. Egbokdara (2006), a system is set of components that interact to achieve a common goal. In another sense, a system is a group of interrelated or intersecting elements forming a unified whole.

A Student Record/Verification system as in this project is an application program used to record that someone or something rightly and legally belongs to a  
collection, an organization or an individual.

This student record system (SRS) is a window based system. It is an electronic and computerized means of verifying someone’s claim of studentship to an institution by means of their matriculation number (Mat No) being input, hence using an output  
clearly showing the truth or false of his/her claim.

**1.1 BACKGROUND OF THE STUDY**

In this modern age, computers have verified the cause of their  
existence. The advent of computers in our society caused a lot of criticism  
on the danger it poses on the society. Critics of computer and new  
techniques express their fear on how computers will displace and replace all  
human skills thus resulting to mass unemployment. The presence of  
computer on virtually every field of today’s fast life has proved the critic  
wrong as the invention of computers and new technologies continues to  
create additional jobs for those who identify themselves with computers and  
new technologies. This make computes partner to human beings in any  
fields of human endeavor.

Over the past decades, students identification and verification has  
been a major problem in large institutions as documents, certificate and  
studentship can be forged at a great rate and easy way, using the computer  
negatively. Forgers fail to know that in this fast moving world, the computer  
has equally served as an aid to decision making, verification and  
authentication.  
This is because of computers efficiency in terms of speed, accuracy,  
reliability, cost and security among others.

In recent years, awareness has existed and created in people as it  
concerned the use of computer in verifying, authenticating and security  
activities either through web-based (internet) or window-based.

**1.2 OBJECTIVES OF THE STUDY**

The objective of Student record System is to allow the administrator of any organization to edit and find out the personal details of a student and allows the student to keep up to date his profile .It’ll also facilitate keeping all the records of students, such as their id, name, mailing address, phone number, DOB etc. So all the information about a student will be available in a few seconds. Overall, it’ll make Student record Management an easier job for the administrator and the student of any organization. The main purpose of this SRS document is to illustrate the requirements of the project Student information System and is intended to help any organization to maintain and manage its student’s personal data.

1. The importance of authentic document and certificate cannot be  
overemphasized as the reputations of institution are affected in every  
counterfeit or forged document or certificate.

2. To design and implement student record system for computer science department. The system will:

* Prove the authenticity of document and certificate belonging to computer science department thereby expunging forged and counterfeit certificate  
  and document from circulation.
* Show the valid and legally registered student of computer science department.
* Prove its supremacy over the existing manual system of verification  
  and identification by using dummy data.

3. To highlight the importance of verifying and authenticating document  
and certificates.

**1.3 SCOPE OF THE STUDY**

The scope and focus of this study is on students’ identification,  
verification and authentication of document and degrees (certificate) and  
monitoring of students via the keep of their basic academic information and  
bio data. Importantly, the student must be students of computer science department OGITECH or was a student of computer science department OGITECH.

DESIGN OF THE SYSTEM

Major factors in database design: In principle, there are only a few things that can be done with a database one can: view the data, find some data of interest, modify the data, add some data and delete some data. To achieve these, three major factors need to be considered in any database system:

* creating the structure of the database
* entering data
* retrieving data

Designing a database system is far from being a trivial operation. Much analysis of the particular application is necessary to determine what data are required and how they must be linked. When this analysis has been done, an appropriate database model can be chosen. Implementation involves planning the input screens, planning the structure of the database files, designing output reports, and so on.

Microsoft Access is a database program that automates the above-mentioned processes (Microsoft Corporation, 2005). It has menu- and prompt-driven program modules that simplify the creation of a complete relational database system:

**1.4 LIMITATION OF THE STUDY**

This study is limited to information gathered from the review of literature  
and the data collection method used. The proposed system is designed on  
.NET frame work. Others limitations to the study include:

1. The implementation and usefulness of the system by COMPUTER SCIENCE DEPARTMENT and other education might not be accepted.  
2. In availability of the system on the internet, thought others user apart  
from the administrator can use it with some abstraction upon the purchase of  
the software and installation there in.

3. Restricted access to some vital and important data and information.

**1.5 METHODOLOGY**

Software methodology is the set of rules and practices used to create  
computer software. It is composed of any one of the software development  
models used together with at least a techniques thus,

METHODOLOGY = SOFTWARE MODEL + TECHNIQUES(S)  
An in-depth literature review is done using document review and the  
internet. The proposed design will be implemented using:

1. MS Visual Studio2012
2. MS SQL SERVER2012

MS Visual Studio2012 tools and Visual Basic as the programming language and MS SQL server 2012 for the database. The methodology to be adopted for this project is the SSADM (Structured System Analysis and Design Methodology). The SSADM  
emphasizes on the completing a phase of the software development before  
proceeding to the next phase and also being able to go back to the other  
phases in a purely sequential manner.

Without a **Student information System**, managing and maintaining the details of the student is a tedious job for any organization.

Student Information system will store all the details of the students including their background information, educational qualifications, personal details and all the information related to their resume .

**System modules:** This software application is designed to register students from admission point; generate matriculation number for each registered students at the close of registration. Subsequently, student details can be modified with the appropriate access rights. The system comprises of the following modules:

* Student Registration
* Course registration
* Attendance Monitoring
* Examination Records
* Enquiries
* Reports
* Systems Administration

**Login module**: Login module will help in authentication of user accounts .Users who have valid login id and password can only login into their respective accounts.

**Search module**: Suppose there are hundreds of students and from this we have to search a particular student and we know the name of the student .In manual system it is a tedious task though we know the name of the student, but using this module we can easily search the student by specifying the name of the student in the search criteria. Thus this module will help the administrator in searching the student with various criteria easily.

**Registration Module and Account Management**: This module will help the student get registered from anywhere if internet is present .This module will really simplify the task of on paper registration. Also after successful registration the user can update information and change their password as and when required.

**User Management**: This module will help the administrator in enabling/disabling a user account and updating user information as required.

Purpose of project is to maintain details of the students such as storing information about:

* Student id
* Student password
* Student name
* Student DOB
* Student mailing address
* Gender
* Registration date
* Student status
* Contact no
* Qualification
* City
* Current picture

Student Matriculation

Number

Student Name, Address, etc

Pointer

Course Code

Course Details

Pointer

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Course Details

Course Details

Pointer

Course Code

Course Code

1.6 Definitions Of Terms, Acronyms and Abbreviations :

* **Personal details:** Details of student such as user id, phone number, address, image, resume, e-mail address etc.
* **Contact details:** Details of contact associated with the student.

* **SRS:** System requirement Specification
* **Administrator:** A Login Id representing the user is an administrator & can access all the records details

