Hajee Mohammad Danesh Science & Technology University, Dinajpur-5200

Project Name: Student Profile Management System

Course Title: Database Sessional

Course Code: CSE 304

Department: Computer Science & Engineering

Level: 3, Semester: I

Proposed By

Md. Mostafijur Rahman

Student ID: 1902073

Hajee Mohammad Danesh Science & Technology University, Dinajpur-5200.

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ABSTRACT

The project ‘Student Profile Management System’ can be used by any educational institutions 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 this project.. Student Profile Management System deals with the various activities related to the students. In our system we can register as a user that is a student and login their registered account. Only those people can be registered in this application whose id and name are stored in the administration database. They can see their details and also update their details if anything is wrong. The departmental notice, general notice and result of all semesters are shown in the result table in CGPA. We can also see the department top result in CGPA. The other people of the institution can see the general notice from this application and notices are modified by administration.

CHAPTER 1
INTRODUCTION

1.1 Introduction

Our project named as Student Profile Management System (SPMS) is useful for easy user interface. The system utilizes the powerful database management, data retrieval and data manipulation. This project provides more ease facilities for managing the data than manually maintaining the documents. The project is useful for saving valuable time and reduces the huge paper work. It will help educational institutions like schools and colleges as well as university also. It will keep track of their student records like personal details, contact details, marks details, etc. As now a days the internet is rapidly becoming a part of the everyday lives of a majority of people in the world. People perform various activities on the Internet and one of them is storing their data in database where they are interested. In these database's they can post the queries and they can retrieve the required data. Obviously there is a need for Student Profile Management System software for management of student's data. There are many departments of administration for the maintenance of any institution information and student databases in the institution. All these departments provide various records regarding students. Most of these track records need to maintain information about the students. This information could be the general details like student name, address, performance, attendance etc. or specific information related to departments like collection of data. All the modules in college administration are interdependent. They are maintained manually. So they need to be automated and centralized as, Information from one module will be needed by other modules. For example when a student needs his course completion certificate it needs to check many details about the student like his name, registration, year of study, exams he attended and their results , running semester courses and also all courses that they must take in all semester and many other details. So it needs to contact all the modules that are office, department and examination and the result of students understanding them.

1.1 Purpose:

The objective of Student Profile Management System(SPMS) 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, date of birth etc. So all the information about student will be available in a few seconds. Overall, it'll make student management an easier job for the administrator and the student of any organization.

The main purpose of this project is to illustrate the requirements of the project 'Student Profile System' and is intended to help any organization to maintain and manage its student's personal data.

1.2 Scope:

Without a 'Student Profile Management 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 .

CHAPTER 2
SYSTEM ANALYSIS

2.1 Existing System: Student Profile Management System (SPMS)

System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Here the key question is- what all problems exist in the present system? What must be done to solve the problem? Analysis begins when a user or manager begins a study of the program using existing system. During analysis, data collected on the various files, decision points and transactions handled by the present system. The commonly used tools in the system are Data Flow Diagram (DFD), use case diagram and ER diagram for maintaining database among different module. Training, experience and common sense are required for collection of relevant information needed to develop the system. The success of the system depends largely on how clearly the problem is defined, thoroughly investigated and properly carried out through the choice of solution. A good analysis model should provide not only the mechanisms of problem understanding but also the frame work of the solution. Thus it should be studied thoroughly by collecting data about the system. Then the proposed system should be analyzed thoroughly in accordance with the needs.

System analysis can be categorized into four parts.

- System planning and initial investigation
- Information Gathering
- Applying analysis tools for structured analysis
- Feasibility study
- Cost/ Benefit analysis.

In the current system we need to keep a number of records related to the student and want to enter the details of the student and the result manually. In this system only the teacher or the school authority views the result of the student and they want to enter the details of the student. This is time consuming and less cost.

2.2 Proposed System - Student Profile Management System

In our proposed system we have the provision for adding the details of the students by themselves. So the overhead of the school authorities and the teachers is become less. Another advantage of

the system is that it is very easy to edit the details of the student and delete a student when it found unnecessary. The results of the student are added in the database and so students can also view the result of any semester whenever they want.

Our proposed system has several advantages

- User friendly interface
- Fast access to database
- Less error
- More Storage Capacity
- Search facility
- Look and Feel Environment

All the manual difficulties in managing the student details in a school or college have been rectified by implementing computerization.

2.3 Feasibility Analysis - Student Profile Management System

Whatever we think need not be feasible .It is wise to think about the feasibility of any problem we undertake. Feasibility is the study of impact, which happens in the organization by the development of a system. The impact can be either positive or negative. When the positives nominate the negatives, then the system is considered feasible. Here the feasibility study can be performed in two ways such as technical feasibility and Economical Feasibility.

2.3.1 Technical Feasibility

We can strongly say that it is technically feasible, since there will not be much difficulty in getting required resources for the development and maintaining the system as well. All the resources needed for the development of the software as well as the maintenance of the same is available in the organization here we are utilizing the resources which are available already.

2.3.2 Economic Feasibility

Development of this application is highly economically feasible .The organization needed not spend much money for the development of the system already available. The only thing is to be done is making an environment for the development with an effective supervision. If we are doing so, we can attain the maximum usability of the corresponding resources.

CHAPTER 3
METHODOLOGY

3.1 Introduction

The objective of Student Profile Management System (SPMS) 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, password of account etc. So all the information about a student will be available in a few seconds. Overall, it'll make Student Information Management an easier job for the administrator and the student of any organization.

3.2 Techniques Used

To develop a system too is and technologies play the most important role. The tools denote the components that are used to create the techniques environment for the programmers. Technology is a collection of skills, methods and processes used in the production of goods or services or in the accomplishment of the objectives, such as scientific investigation. Technology is the knowledge of techniques, processes etc. or it is embedded in machines, computers, devices and factories, which can be operated by individuals without detailed knowledge of the workings of such things .Technology describes the way to code a particular project.

Hardware and Software Requirements of this project:

Hardware Requirements:

Processor: 1 GHz Processor

RAM: 1GB (minimum required)

Hard Disk: 40 GB

Software Requirements:

Language: Java

For GUI: Java Toolkit- Java Swing

Backend: MySQL Local Server

Backend Software: XAMPP SQL Server

Environment: NetBeans IDE 8.2

Operating System: Windows 10 or Windows 11

3.3 Registration Module

- In this module, the student will get registered as it is new in the educational institute. It will be formed like a structure where all the student details will be filled.
- It will have the fields regarding their personal information name, student id, department, email address, password etc.
- As this module is present online, the student can register them from anywhere on the internet is present. After registration information will go to the admin panel.
- This module will reduce the hectic task of taking multiple forms from the institute and filling them carefully as any mistake will lead to getting new sets of the forms.
- Student can update their details any time by log in using their id and password.

3.4 Login Module

- This will help users to login into the system using institute id and password. A user who has the valid id and password can only log in to their respective accounts.
- It will help the authentication of the user who enters the system. The module provides a layer of security over the system as only authorized personnel can login into the system.
- This prevents any anonymous person to enter the system and mishandle the records. It is better than the manual method as they do not have any security measure of who can access the system and who cannot.

After login their account they can see the tabs which are related to their profile. Tabs are describe as submodules of login.

3.4.1 Students Details:

Here Student can see their details. They can see their name with student ID, phone number email. If they want to change any of these they can update details by clicking the update button. Any time student can log out from their account.

3.4.2 Course

Each student will be able to see various courses present in the system.

They can see their courses which are present in the running semester and can also see the all courses that they are completed and will be completed in future semester. It will be published and managed by the administrator under the specific department. Every course has the Course code, course title and the total credits, it will be available to those students who are eligible for it. It will be added to their professional information details. All the courses will be handled by the department assigned to them by the administrator.

3.4.3 Notice

All notices are maintained by the department and the administration. Student can see their departmental notice and also the general notice of the university after login to their account. Notice details and the date are mentioned in notice module.

3.4.4 Result

In this module students can see their semester result in GPA individually of all semesters and the CGPA also. They can see the all students result of the department they are belongs to and also can see the department top result. The results are created by the administration and automatically calculated in CGPA. Only the students of a department can see the results of their individually after login their account.

CHAPTER 4
DESIGN

4.1 Introduction

Design and implementation of SPMS provides a simple interface for maintenance of student information. Before implementation a proper design makes the project perfect.

4.1.1 Scope and purpose

The purpose of the design phase is to develop a clear understanding of what we wants people to gain from his/her project. As this is team work project, the test for every design decision should be "Does this feature fulfill the ultimate purpose of the project?" A purpose statement affects the design process by explaining what the we wants the project to do, rather than describing the project itself. The Design Document will verify that the current design meets all of the explicit requirements contained in the system model as well as the implicit requirements desired by the customer.

4.1.2 Overall System Design Objectives

The overall system design objective is to provide an efficient, modular design that will reduce the system's complexity, facilitate change and result in an easy implementation. This will be accomplished by designing a strong cohesion system with minimal coupling. In addition, this document will provide interface design models that are consistent user friendly and will provide a forward transition through the various system functions.

4.2. System Architecture Design

4.2.1 System Architecture

The SPMS is a system which contains major parts which include: student detail, Student result and notice. The user selects one of the available options as an input to the system. According to the input by the user the system acts and the rest of the functions are performed accordingly. The administrator can operate on any student details. But the normal student or users can only access their details of all the functionalities.

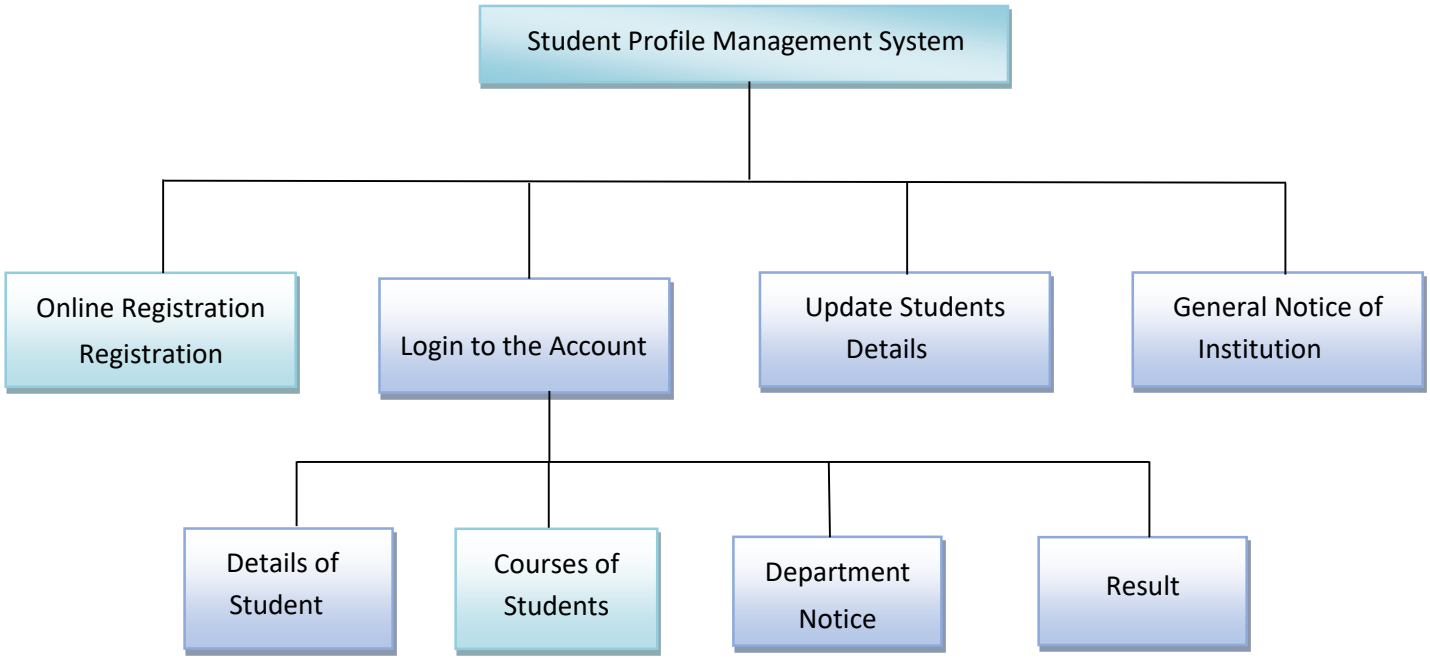


Figure: Architectural design

4.3 Data Design

4.3.1 Data Flow Diagram

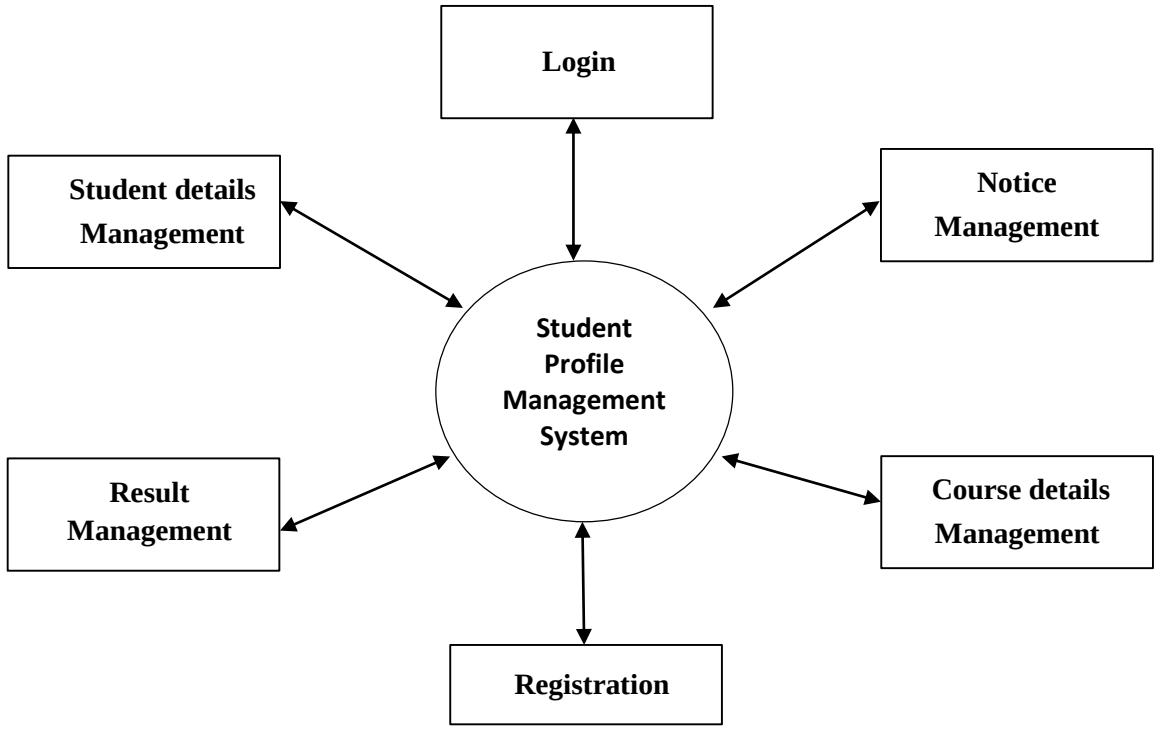
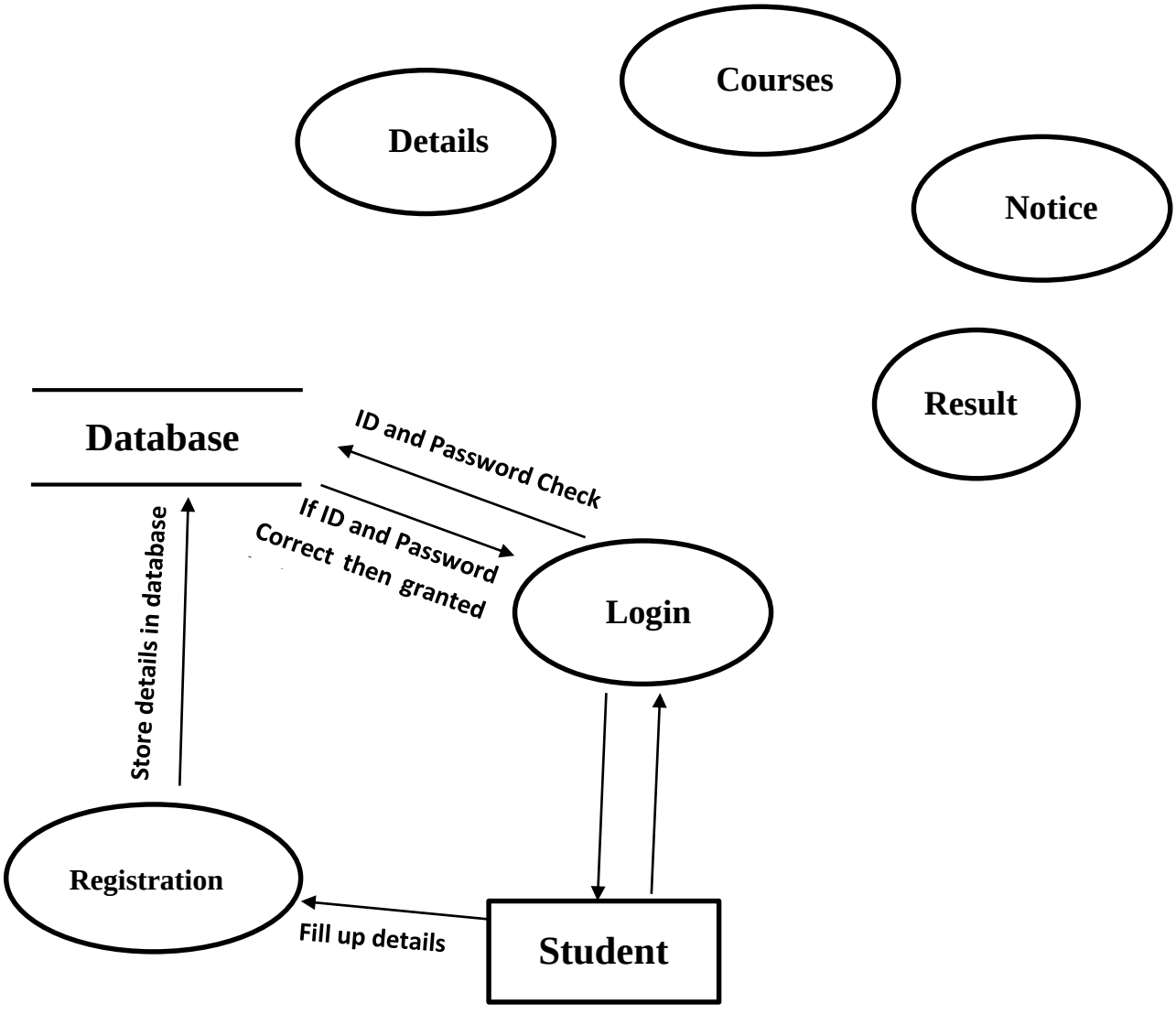


Figure: Zero Level DFD- Student Profile Management System


Courses
Details
Notice
Result
Database
ID and Password Check
If ID and Password
Correct then granted
Login
Store details in database
Registration
Fill up details
Student

4.3.1 Use Case Diagram

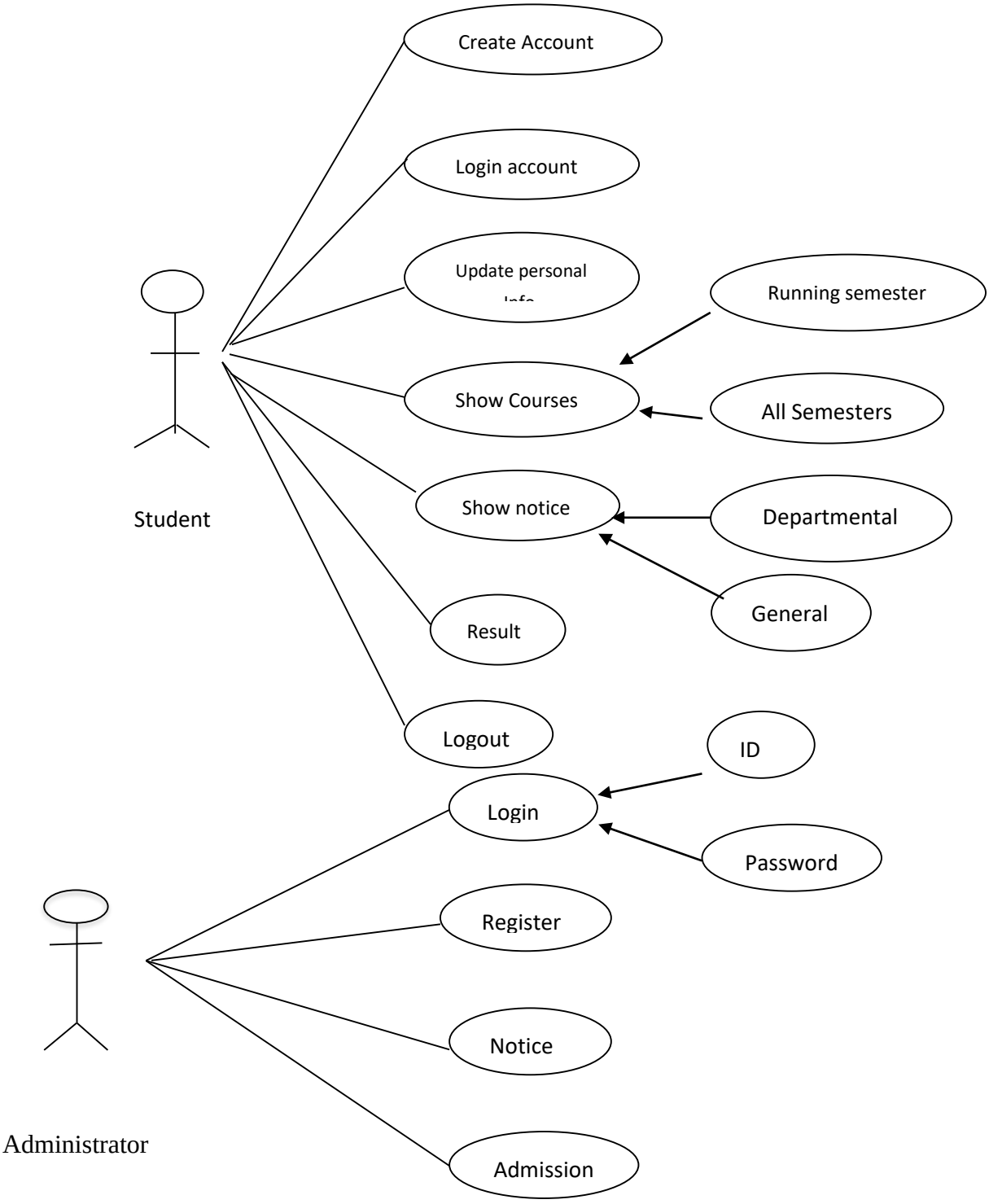
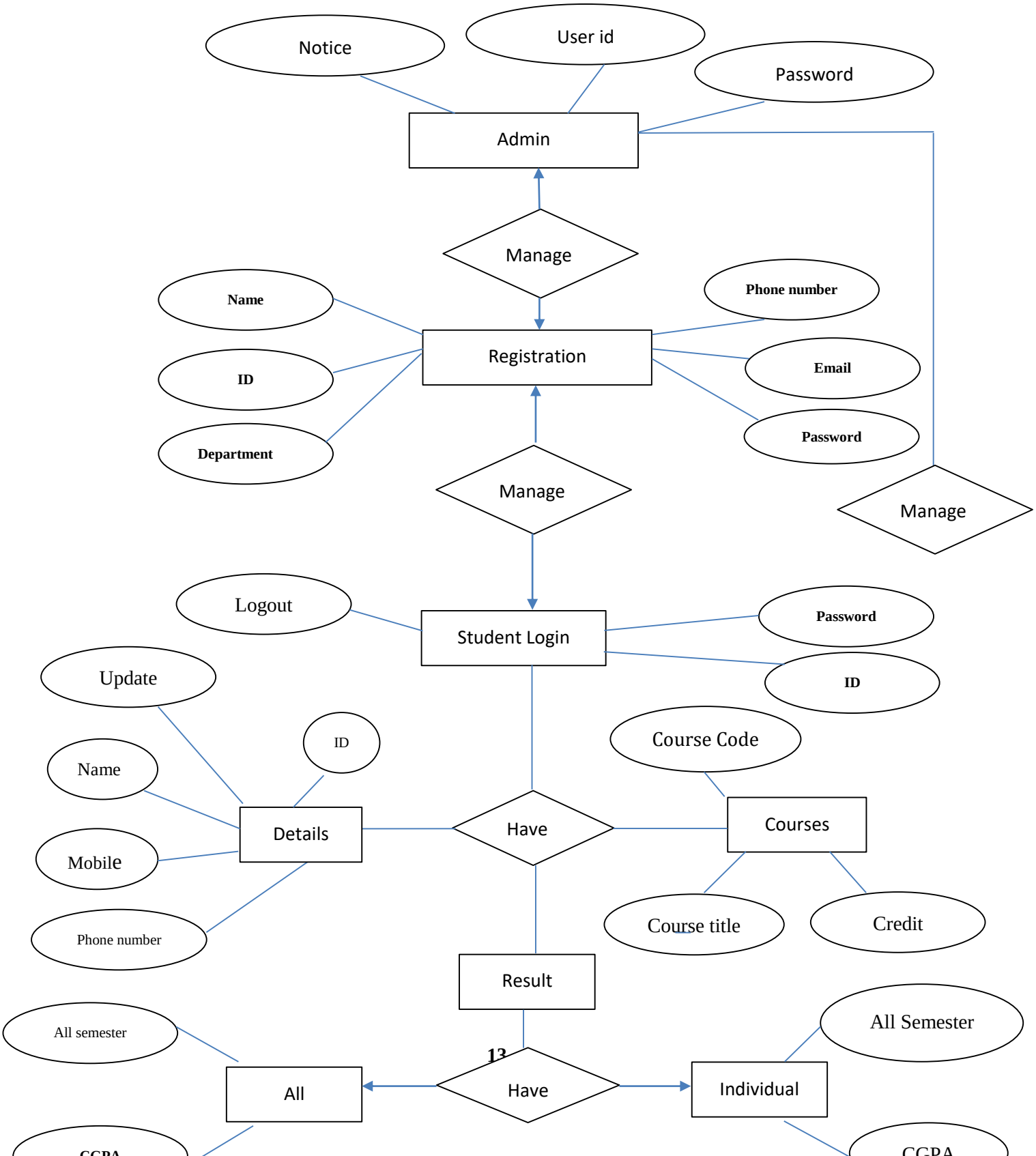


Figure: Use Case Diagram

4.3.2 Entity Relationship Diagram



CHAPTER 5
RESULT AND DISCUSSION

5.1 Introduction

After implementation, we get our system ready with some output. We apply all our algorithms perfectly and after running this system in our platform we get the User Interface to understand which task will be worked for each algorithm. It will also be very easy to understand to the general people what happens in these algorithms.

5.2 Project Outputs

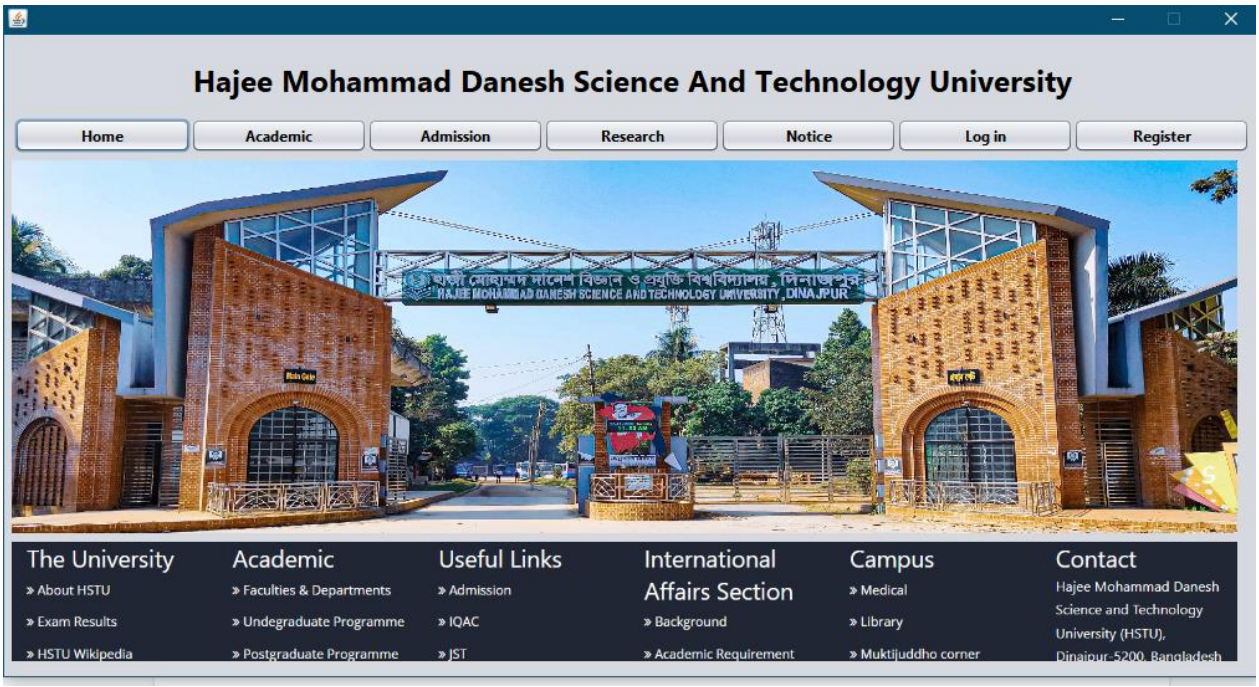


Figure 5.1: Home Page.

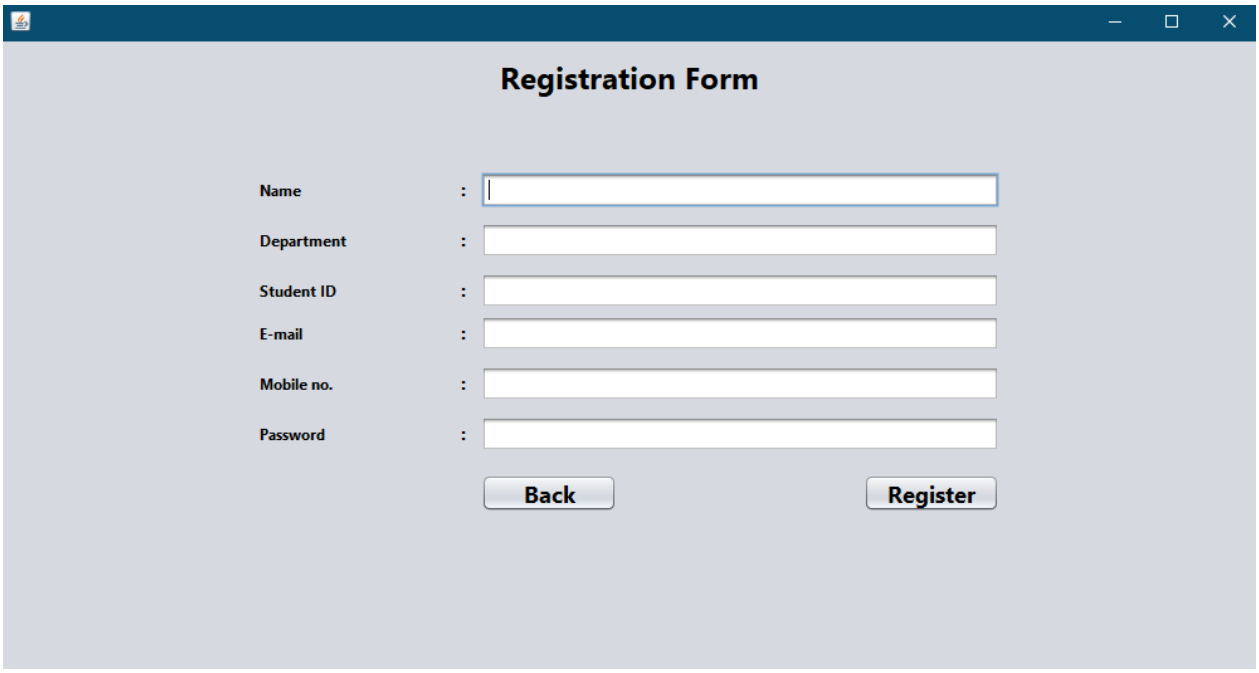


Figure 5.2: Student Registration Form.

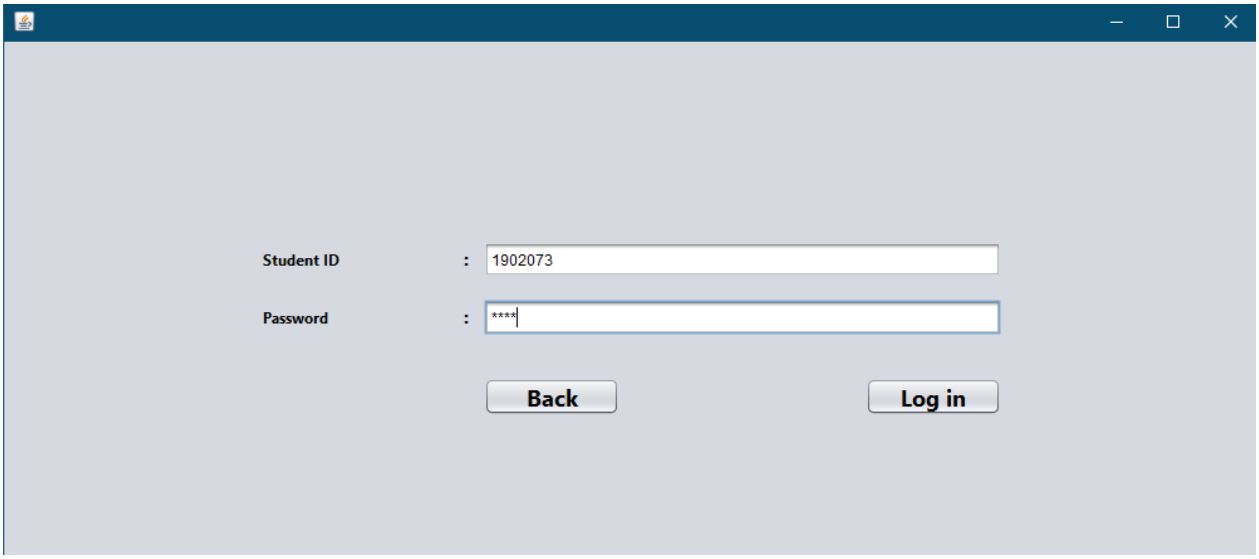


Figure 5.3: Student Login Page.

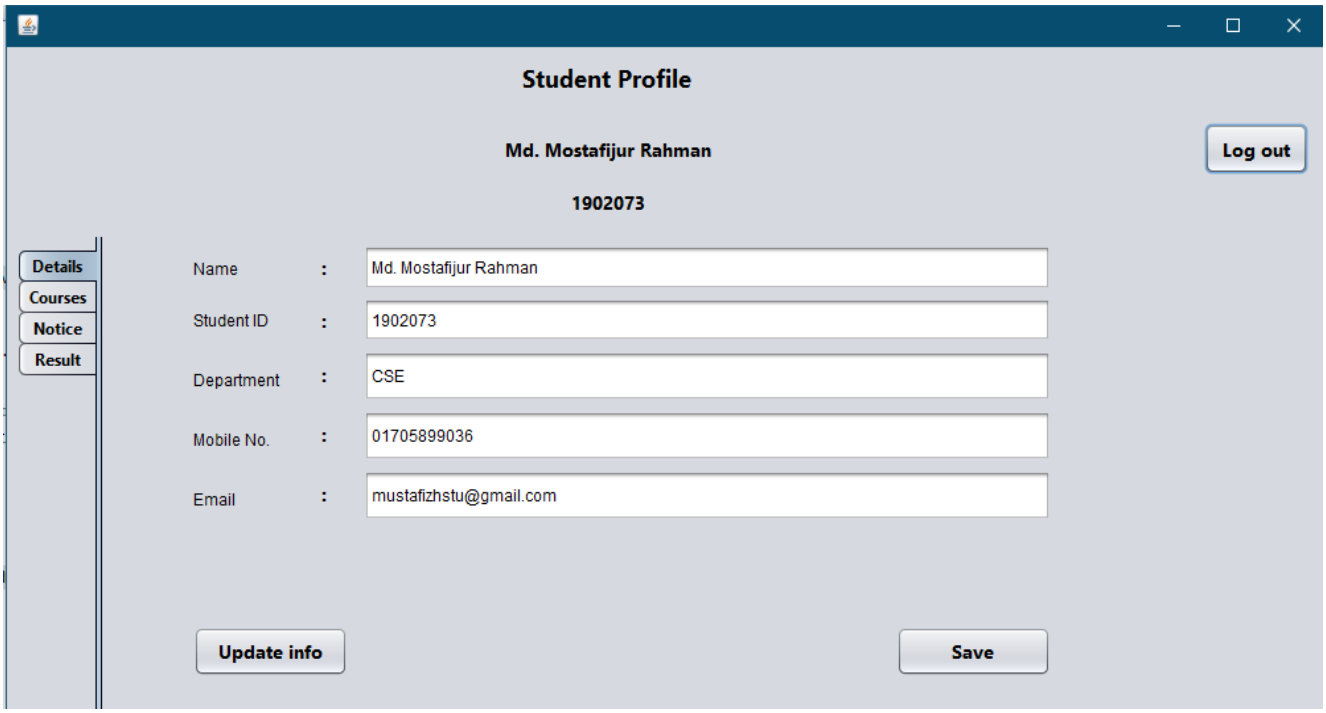


Figure 5.4: Student details Page

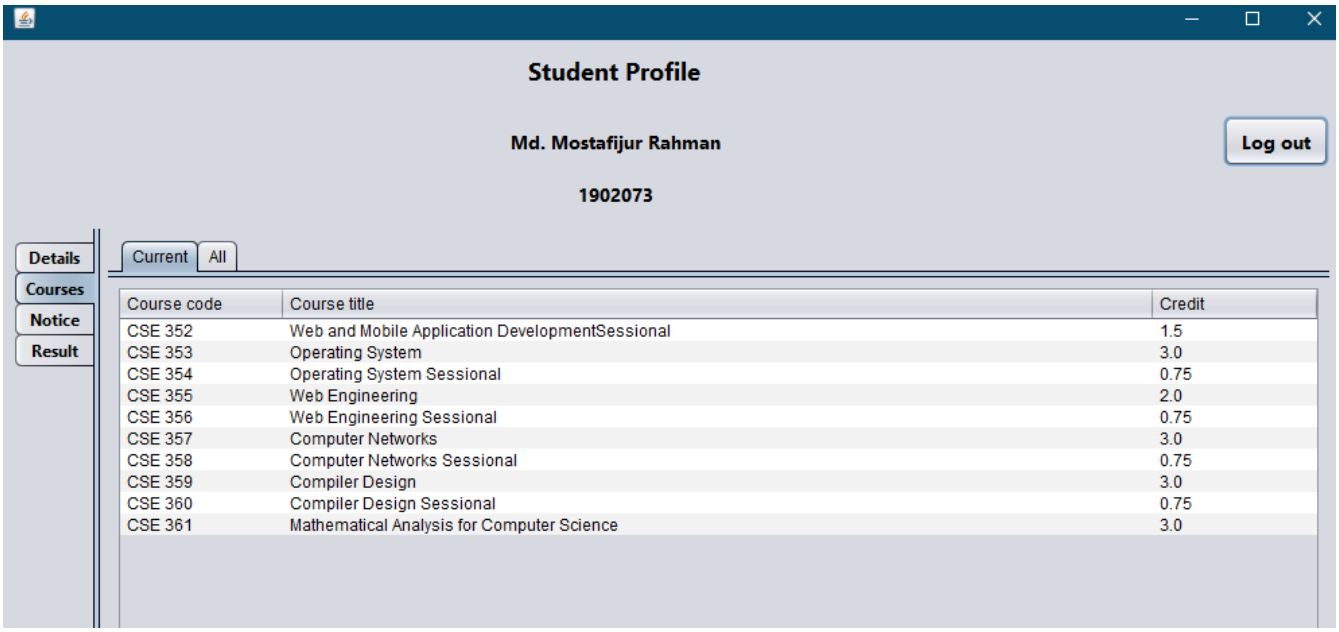


Figure 5.5: Student Course Details (Running Semester)

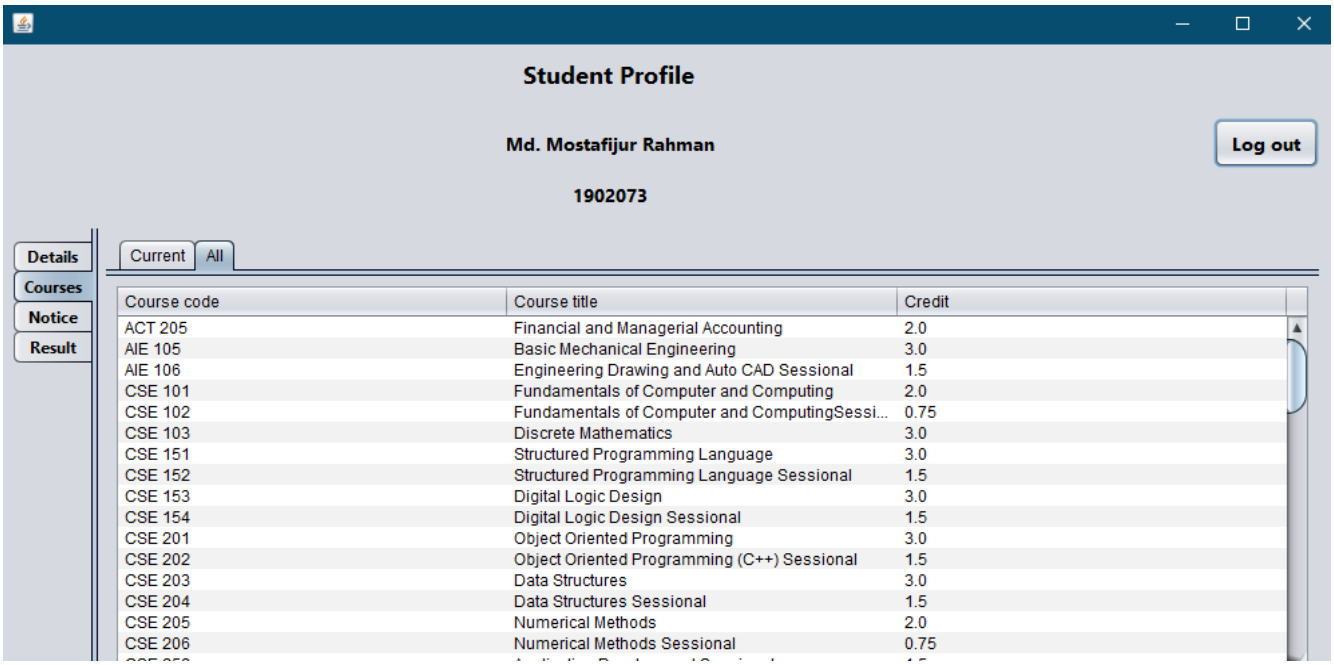


Figure 5.6: Student Courses (All Semesters)

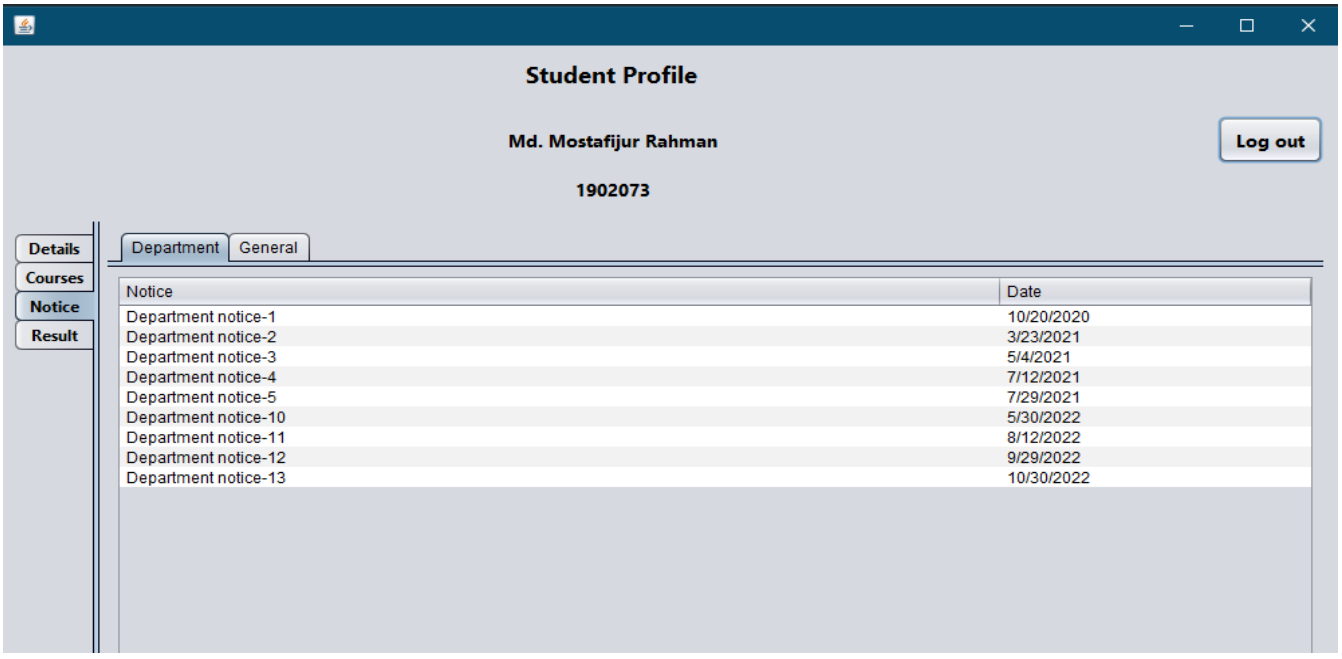


Figure 5.6: Departmental Notice

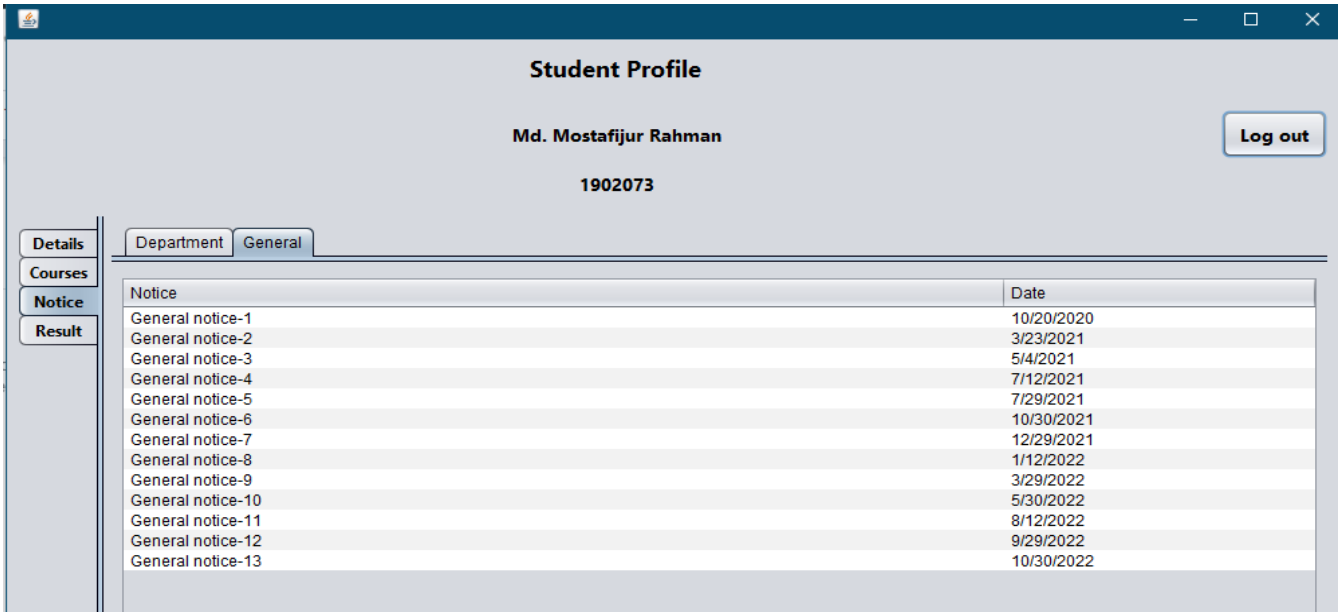


Figure 5.6: General Notice

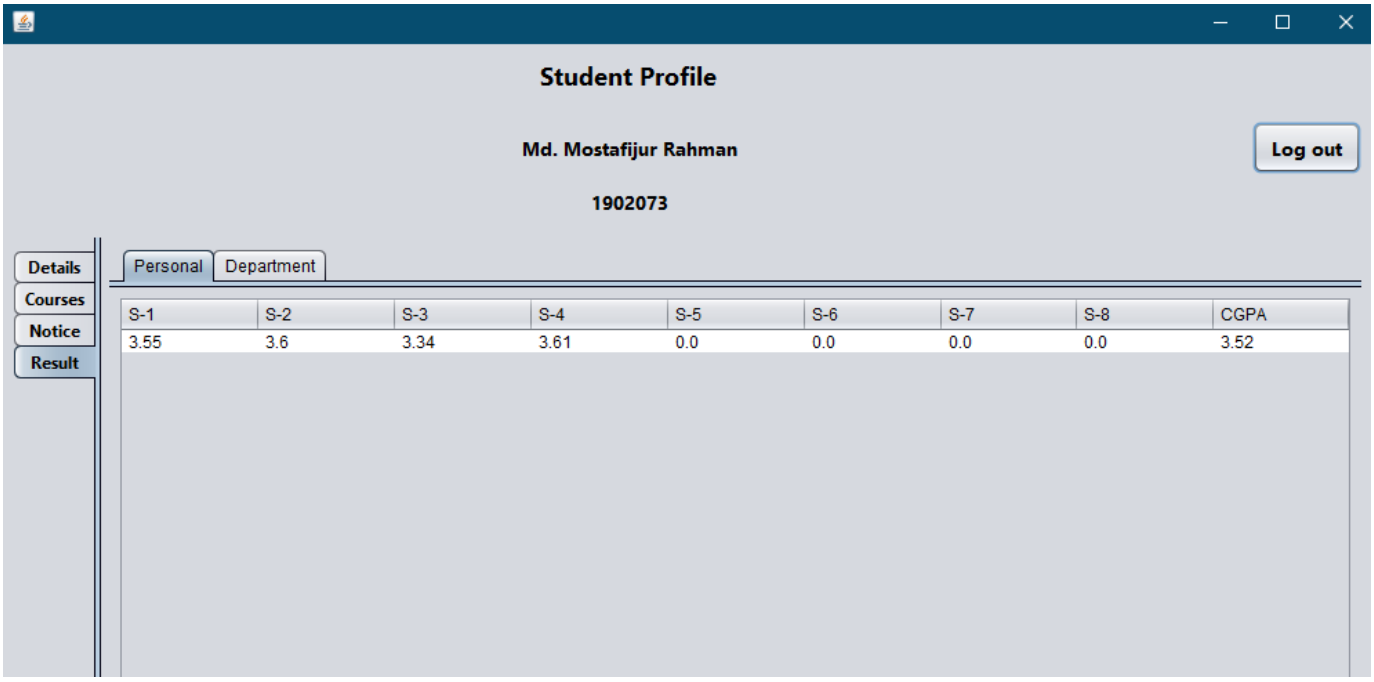


Figure 5.6: Student Result Details

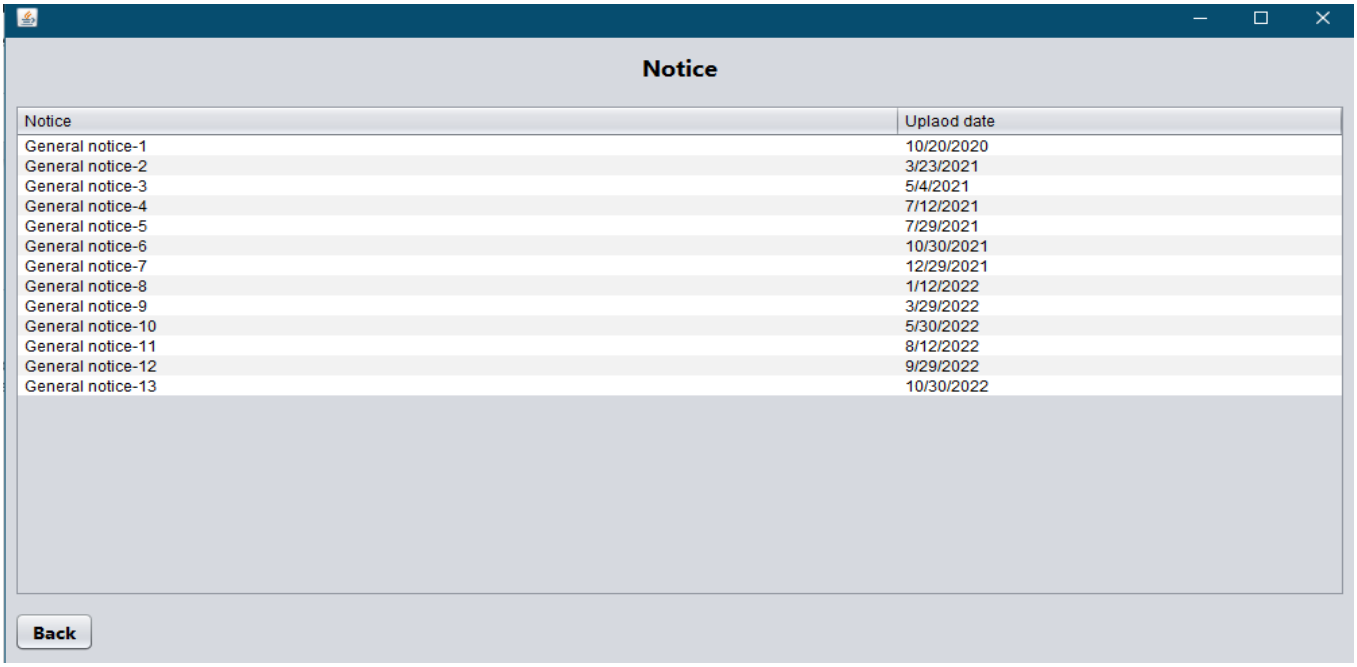


Figure 5.6: University General Notice.

CHAPTER 6

CONCLUSION & FUTURE WORKS

Such a system has immense potential for future growth not only for students but also for faculty as well as departments concerned in improving their efficiency of work with no or less burden. Some of the areas where future scope lies and if implemented would help a great deal to the students at large. In the Future, students can also download and upload notes. Also, it would be possible for students to watch lectures in the form of video content which would facilitate easy access to study material. Further enhancement would help in Statistics tracking and analytics of a student's performance according to his/her result.

Thus, using a GUI based java application we have successfully created an application with a welcome page, login verification page, which takes various student details as input, verifies them and displays it in the end. A major advantage of GUI is that it makes computer operation more intuitive and thus easier to learn and use. Buttons are more user friendly than long command lines. GUIs provide the user with immediate, visual feedback about the effect of each action. The system provides excellent support to any educational institution because they can easily maintain their problem as computerized surveying systems provide easy, fast access and support for the user.