Teacher Assistant

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING.

BANGLADESH UNIVERSITY OF BUSINESS & TECHNOLOGY.
(BUBT)
MIRPUR-2, DHAKA.

November, 2021

Teacher Assistant

A project
Submitted to the Department of Computer Science and Engineering
Bangladesh University of Business and Technology (BUBT), Dhaka in
partial fulfilment of requirements
for the software development -1 of
BACHELOR OF SCIENCE
IN
COMPUTER SCIENCE AND ENGINEERING.

BY-

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Intake: 43

SUPERVISED BY-

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ABSTRACT

Teachers are the main part of our educational system. They perform their honorary duty to teach us. But it is a lot of trouble to maintain student attendance, marks and all the student details. It will involve a lot of pen and paper work. Sometimes there will be some huge heap of files bundled up and kept together in some corner of the office. If they want to add a student assignment mark then they have to go through a lot of paperworks.But through our Teacher Assistant they can easily add any type of exam marks any time and without doing a lot of work. It can be used by educational institutes or colleges to maintain their departments easily. The creation and management of accurate, up-to-data information regarding a student's academic career is critically important in the university as well as colleges. It Tracks progress of those students, their marks, attendants and it lets teachers to add or update their marks and bring all this tiresome work in their fingertips.

DECLARATION

We hereby declare that the project entitled "**Teacher Assistant**" submitted in partial fulfilment by us for the degree B.Sc. Engineering in Computer Science and Engineering in the faculty of Computer Science and Engineering of Bangladesh University of Business and Technology (BUBT) under the guidance of our supervision of **Shovon Roy,** Lecturer, department of Computer Science and Engineering is our own work and it contains no material which has been accepted for the award to the candidates of any other disciplines expect few references which is taken from various books and authors to enrich our knowledge about the topic of our project.

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CERTIFICATE

TO WHOM IT MAY CONCERN

That is to certify that Partho Debnath, Fayezur Rahman and Jack Pritom Soren students of B.Sc. in CSE has completed their project work titled "Teacher Assistant" satisfactorily in partial fulfilment for the requirements of B.Sc. in Computer Science and Engineering from Bangladesh University of Business and Technology in the year November,2021.

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Project Supervisor

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DEDICATION

Dedicated to our teachers for all their love and inspiration.

ACKNOWLEDGEMENT

"Task successful" makes everyone happy. But happiness will be gold without glitter if we didn't state the persons who have supported us to make it a success. Success will be crowned to people who made it a reality but the people whose constant guidance and encouragement made it possible will be crowned first on the eve of success.

This acknowledgment transcends the reality of formality when we would like to express deep gratitude and respect to all those people behind the screen who guided, inspired and helped me for the completion of our project work. We consider ourselves lucky enough to get such a good project. This project would add as an asset to our academic profile.

We express our gratitude to the help of our supervisor **Shovon Roy**, for his constant supervision, guidance and co-operation throughout the project and for giving constant motivation and valuable help through the project work. We also would like to thanks to our honourable chairman **Dr. Muhammad Firoz Mridha,** for his support and giving us support and giving us permission to use the computer lab whenever we needed.

We extend our sincere gratitude to our parents who have encouraged us with their blessings to do this project successfully. Finally, we would like to thank all our friends, all the teaching and non-teaching staff members of the CSE Department, for all the timely help, ideas and encouragement which helped throughout the completion of the project.

APPROVAL

This project "**Teacher Assistant** " submitted by **Partho Debnath**, **Fayezur Rahman** and **Jack Pritom Soren** ID No. **19201103016, 19201103017** and **19201103032** students of B.Sc. in Computer Science and Engineering from Bangladesh University of Business and Technology in the year November, 2021 under the supervision of **Shovon Roy,** Lecturer, Department of Computer Science and Engineering has been accepted as satisfactory for the partial fulfilment for the requirements of B.Sc. in Computer Science and Engineering and approved as to its style and contents.

Project Supervisor

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ABBREVIATIONS

Synonyms and Acronyms	Descriptions
RAM	Random Access Memory
CPU	Central processing unit
GHz	Gigahertz
HDD	Hard Disk Drive
C# Programming Language	Computer Programming Language
MB	Megabytes
IDE	Integrated Development Environment

Table

1.1 Introduction

Teacher Assistant is software which is helpful for teacher as well as the school/college/university authorities. In the current system all the activities are done manually. It is very time consuming and costly. Our Teacher Assistant deals with the various activities related to the teachers.

There are mainly 3 modules in this software

i. Admin Module.
ii. Instructor Module.
iii. Marks and Attendance Management.

1.2 Problem Statement

In this software we can create accounts as instructor. It has an admin panel through which he can manage the department related things. At the beginning of each semester Admin can prefer the courses and instructors according to the department and section. Admin will be able to add department, section and intake any time. We will save all this data in a database through the xampp server. Through this program we will add and calculate Marks of the students of each section and save it in the database. Instructors can easily login to their account and add marks and attendance. He can add marks according to the exam type he chooses.

1.3 Motivation

- In this age of modern science, the education system has been going through a lot of development.
- In the current situation, teaching method of teachers needs a lot of development too.
- For maintaining the quality of education in this era, proper materials are needed to make teaching easier for them.
- Thus, the primary motivation for creating a “Teacher Assistant” is to help our valuable teachers so that they can do their daily education related works as easily as possible.
- Other motivations are: to built a digital education system and take our education method one step forward.

1.4 Objectives

Stated the desired goals and objectives to address the needs. Also included the key benefits of reaching objectives.

- Every day the teacher can add class attendance of the students.
- Teachers can save student exams and assignments marks.
- Teachers can see Student Details.
- teachers can see if the student is enable to participate in the exam or not.
- Finally, teachers can see the total attendance and total mark of each student.

1.5 Methodology

The methodology which is used to develop the application system. This also includes the system development methodology that refers to the framework that was used in developing the Teacher Assistant application from planning, information gathering, design and until the end of the system. While working on this project, we will be able to learn C# and MySQL database. We have learned object-oriented programming and many more.

1.6 Organization of Project Report

This project will help us manage the student and instructor's data more preciously as we will get of current semester and previous semesters and many more.

1.7 Conclusions

Overall, this Application will help us to manage the data of a of student's attendance, marks and other informations. It'll also help our teachers with all the information they need from students.

2.1 Introduction

In this chapter we will get to know other's existing Teacher Assistant system software and their work ways.

2.2 Existing System

There are also lots of Teacher Assistant software on the internet. Different Teacher Assistant system has different features. Some of has lots of features. From internet a Teacher Assistant software has some good features.

Some existing Teacher Assistant System Projects Links:

- https://phpgurukul.com/teachers-record-management-system-using-php-and-mysql/

2.3 Supporting Literature

2.3.1 Visual Studio

Microsoft Visual Studio is an integrated development environment (IDE) from Microsoft. It is used to develop computer programs, as well as websites, web apps, web services and mobile apps. Visual Studio uses Microsoft software development platforms such as Windows API, Windows Forms, Windows Presentation Foundation, Windows Store and Microsoft Silverlight. It can produce both native code and managed code.

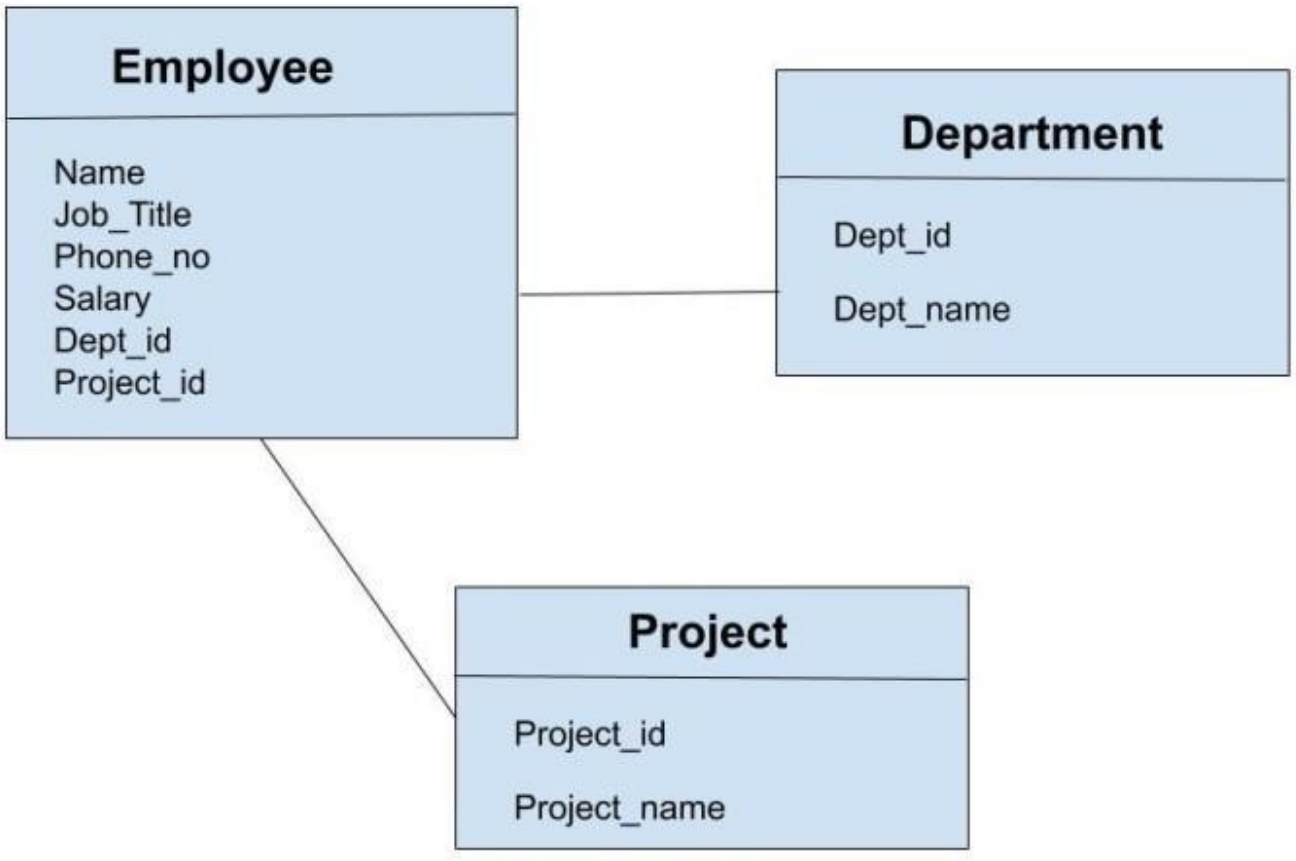
Visual Studio includes a code editor supporting IntelliSense (the code completion component) as well as code refactoring. The integrated debugger works both as a source-level debugger and a machine-level debugger. Other built-in tools include a code profiler, designer for building GUI applications, web designer, class designer, and database schema designer. It accepts plug-ins that expand the functionality at almost every level—including adding support for source control systems (like Subversion and Git) and adding new toolsets like editors and visual designers for domain-specific languages or toolsets for other aspects of the software development lifecycle (like the Azure DevOps client: Team Explorer).

Visual Studio supports 36 different programming languages and allows the code editor and debugger to support (to varying degrees) nearly any programming language, provided a language-specific service exists. Built-in languages include C,[8] C++, C++/CLI, Visual Basic .NET, C#, F#,[9] JavaScript,

TypeScript, XML, XSLT, HTML, and CSS. Support for other languages such as Python,[10] Ruby, Node.js, and M among others is available via plug-ins. Java (and J#) were supported in the past.

2.3.2 Schema Diagram

The design of the database is called a schema. This tells us about the structural view of the database. It gives us an overall description of the database. A database schema defines how the data is organised using the schema diagram. A schema diagram is a diagram which contains entities and the attributes that will define that schema. A schema diagram only shows us the database design. It does not show the actual data of the database. Schema can be a single table or it can have more than one table which is related. The schema represents the relationship between these tables.



Schema

2.3.3 C# Language

C# is a general-purpose, multi-paradigm programming language. C# encompasses static typing, strong typing, lexically scoped, imperative, declarative, functional, generic, object-oriented (class-based), and component-oriented programming disciplines.

C# was designed by Anders Hejlsberg from Microsoft in 2000 and was later approved as an international standard by Ecma (ECMA-334) in 2002 and ISO (ISO/IEC 23270) in 2003. Microsoft introduced C# along with .NET Framework and Visual Studio, both of which were closed-source. At the time, Microsoft had no open-source products. Four years later, in 2004, a free and open-source project called Mono began, providing a cross-platform compiler and runtime environment for the C# programming language. A decade later, Microsoft released Visual Studio Code (code editor), Roslyn (compiler), and the unified .NET platform (software framework), all of which support C# and are free, open-source, and cross-platform. Mono also joined Microsoft but was not merged into .NET.

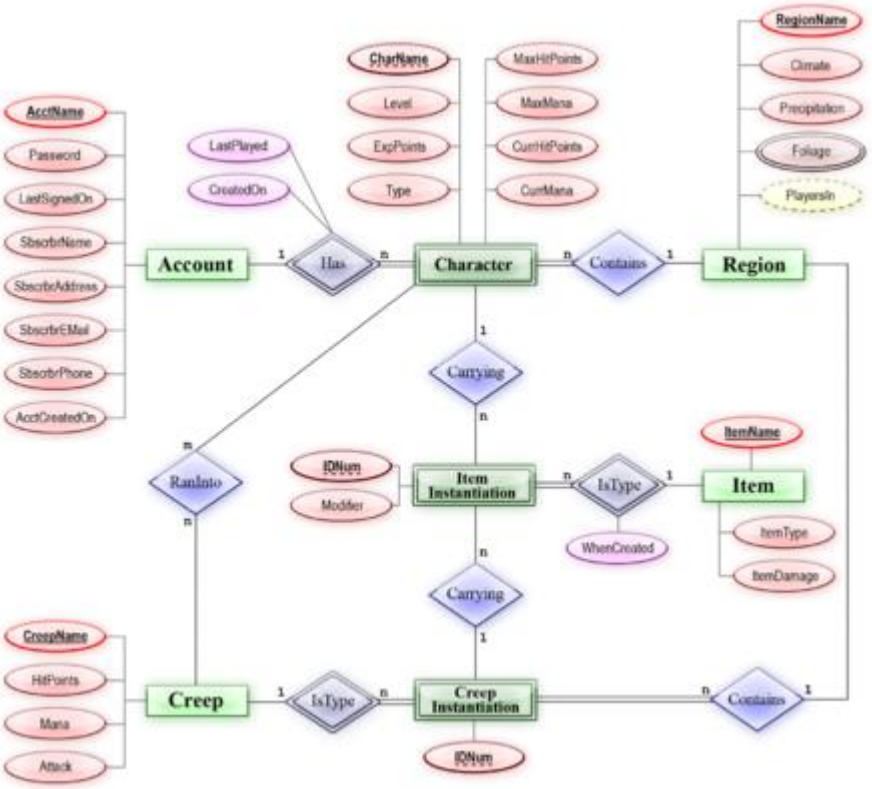
As of 2021, the most recent version of the language is C# 10.0, which was released in 2021 in .NET 6.0.

2.3.4 ER Diagram

An entity–relationship model (or ER model) describes interrelated things of interest in a specific domain of knowledge. A basic ER model is composed of entity types (which classify the things of interest) and specifies relationships that can exist between entities (instances of those entity types).

In software engineering, an ER model is commonly formed to represent things a business needs to remember in order to perform business processes. Consequently, the ER model becomes an abstract data model, that defines a data or information structure which can be implemented in a database, typically a relational database.

Entity–relationship modeling was developed for database and design by Peter Chen and published in a 1976 paper, with variants of the idea existing previously. Some ER models show super and subtype entities connected by generalization-specialization relationships, and an ER model can be used also in the specification of domain-specific ontologies.



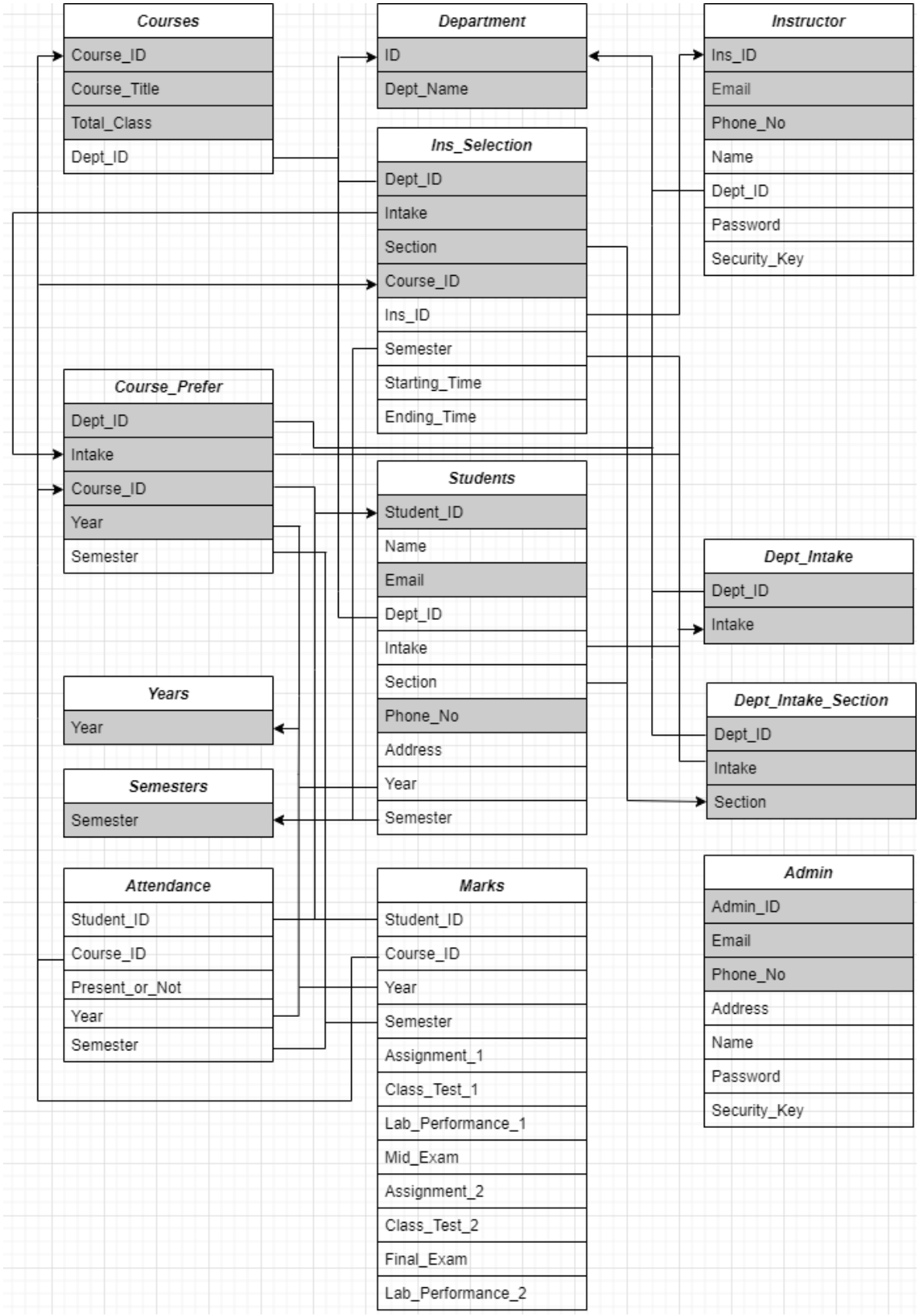
2.4 Conclusion

In this chapter we learned about C# Programming language Schema Diagram and ER Diagram.

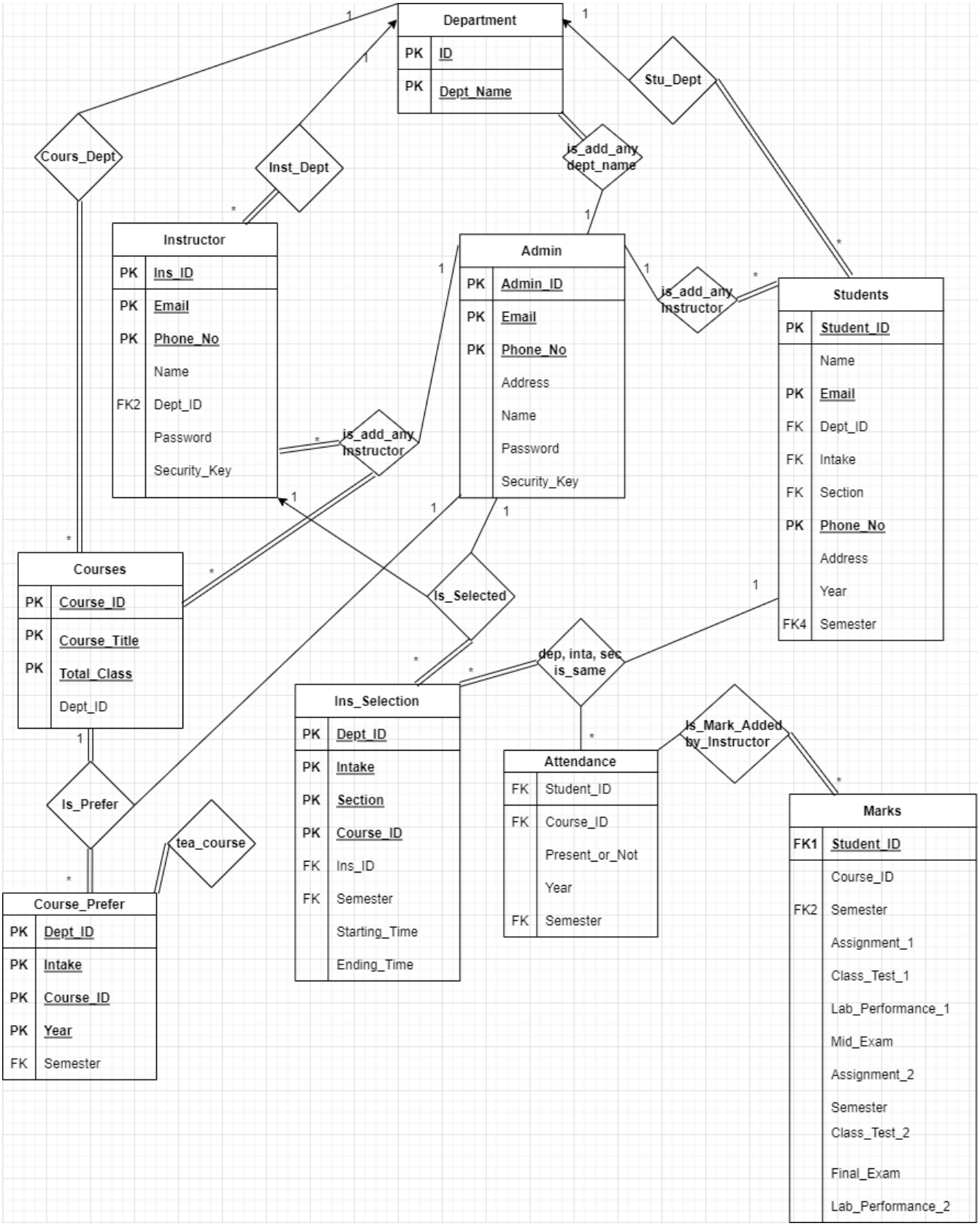
3.1 Introduction

In this chapter we will get to know about our system management software Schema Diagram, ER Diagram, software requirements, hardware requirements and how it works.

3.2 Schema Diagram



3.3 ER Diagram



3.4 System Requirements

3.3.1 Hardware Requirements:

CPU: Intel Pentium Dual Core Processor

Minimum RAM: 2GB

Recommended Ram: 4GB

HDD: 200 MB

3.3.2 Software Requirements:

OS: Windows (32 & 64 Bit)

Software:

I) Visual Studio

II) Xampp

III) MySQL Connector

3.5 User Interfaces

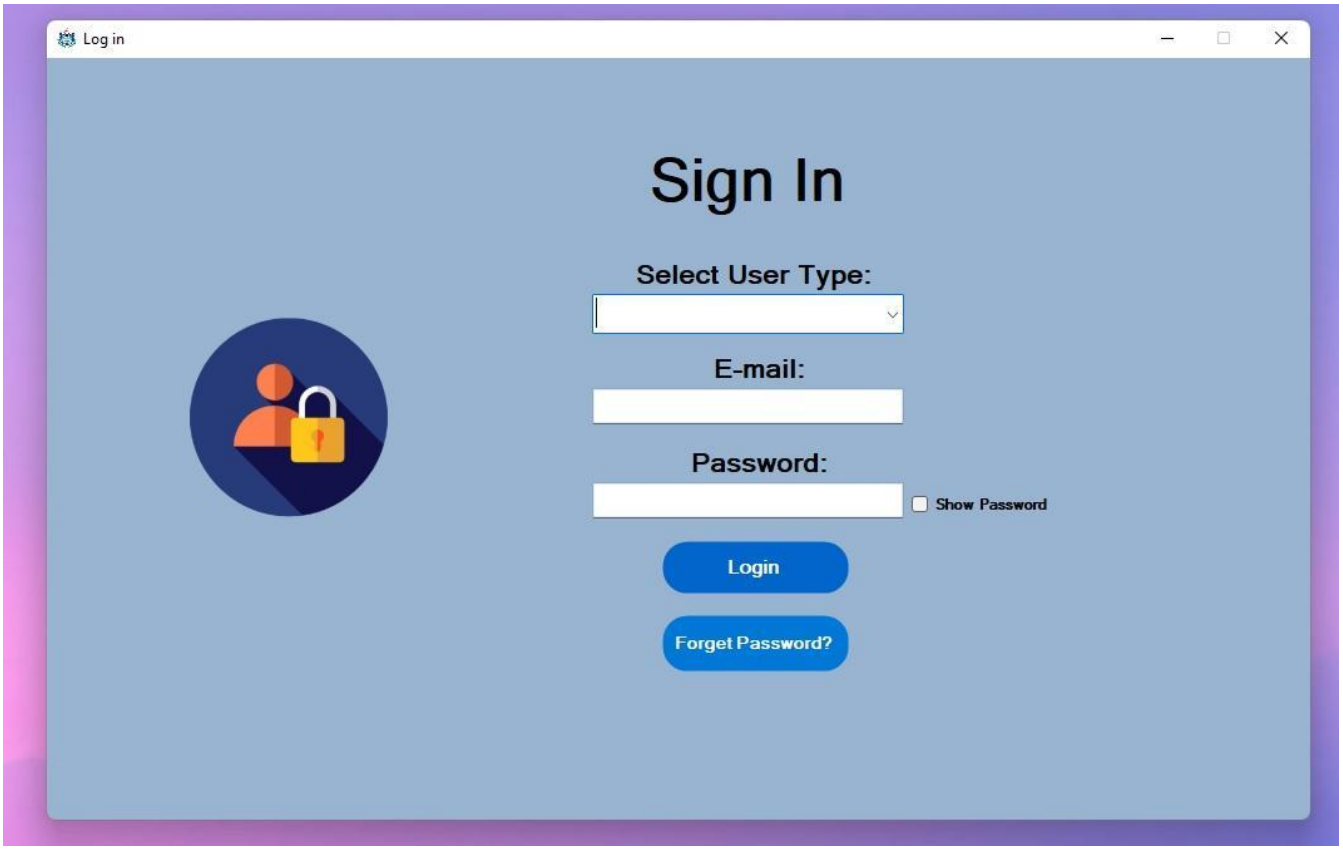


Figure 3.4.1: Login Menu

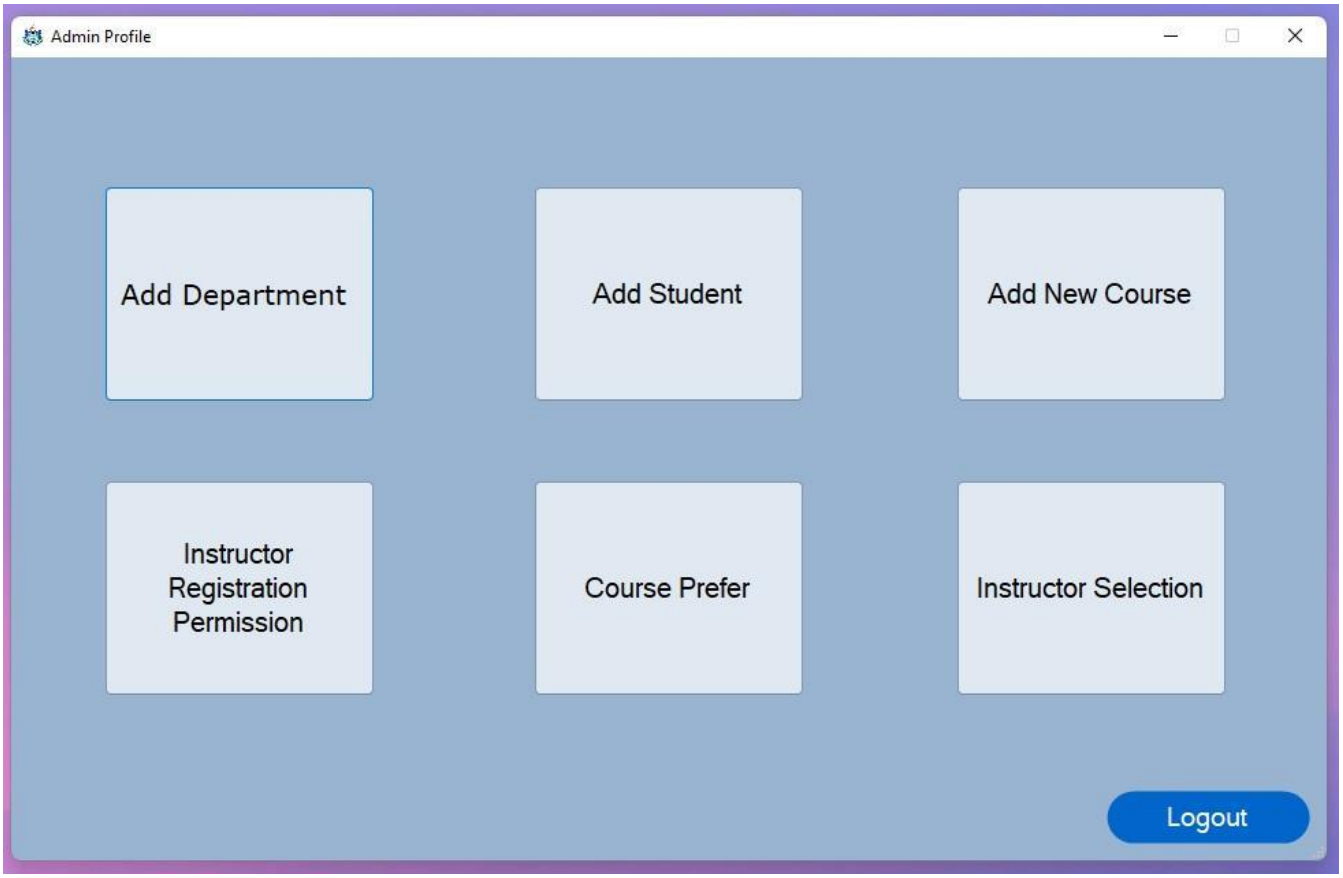


Figure 3.4.2: Admin Profile

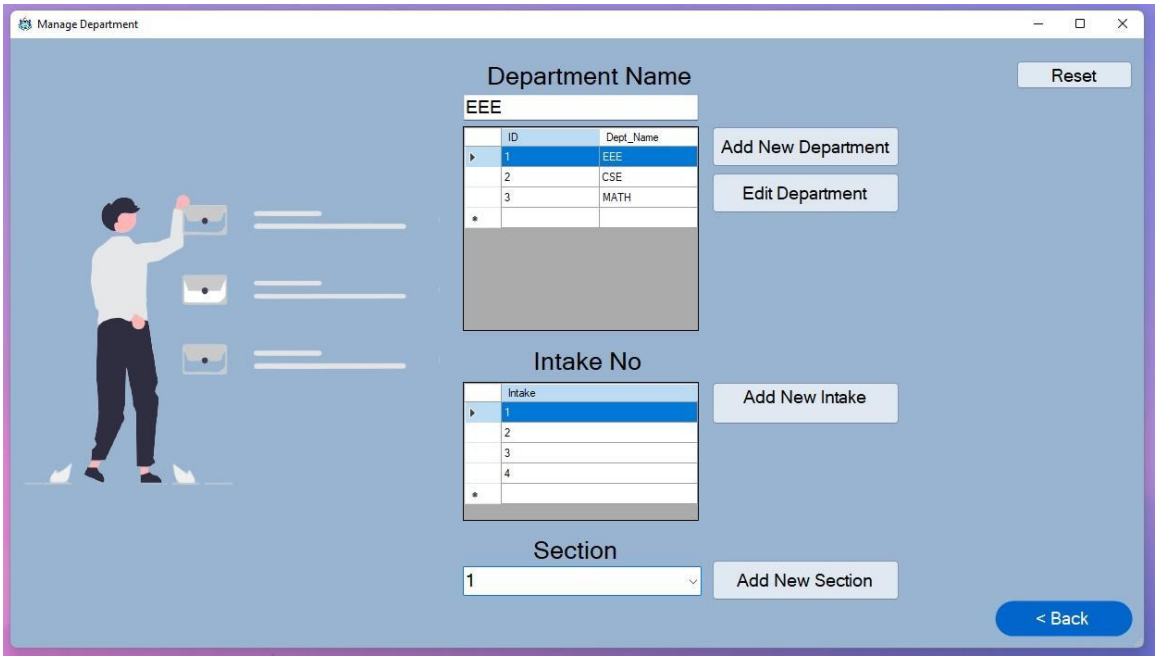


Figure 3.4.3: Manage Department

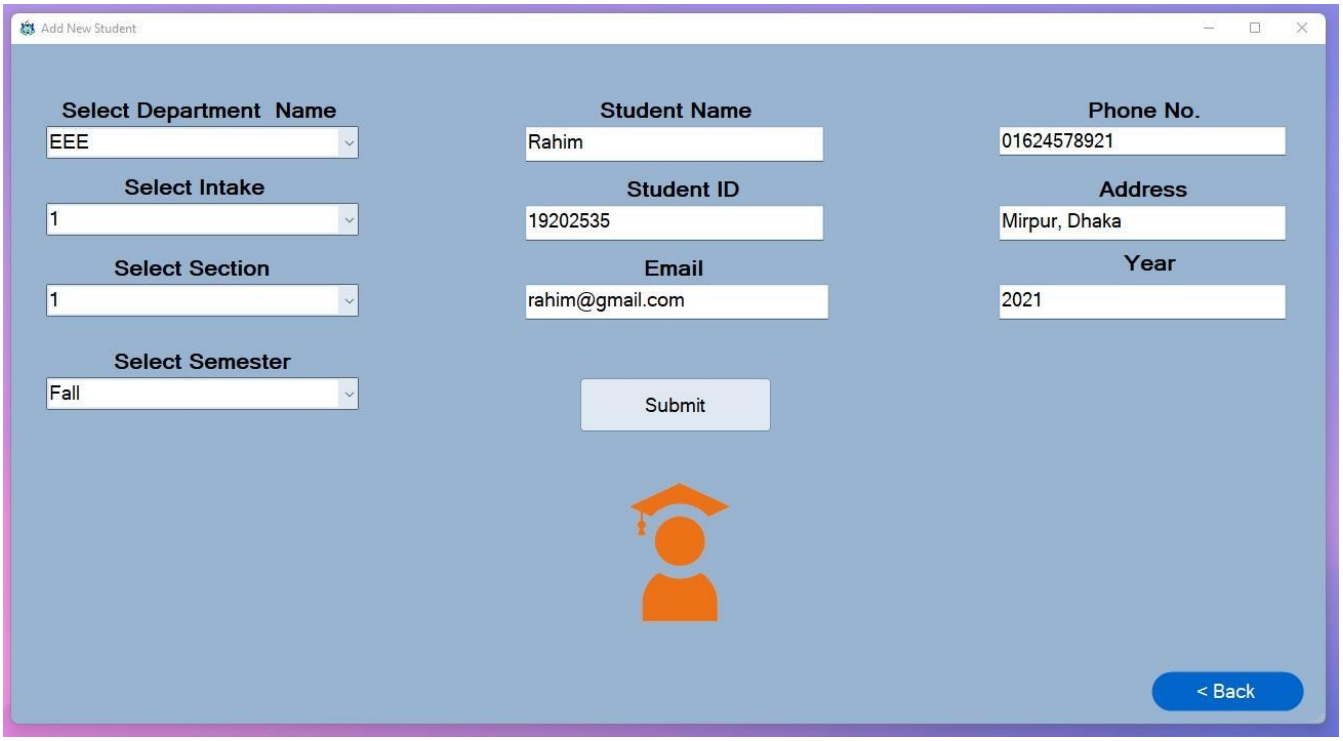


Figure 3.4.4: Add New Student

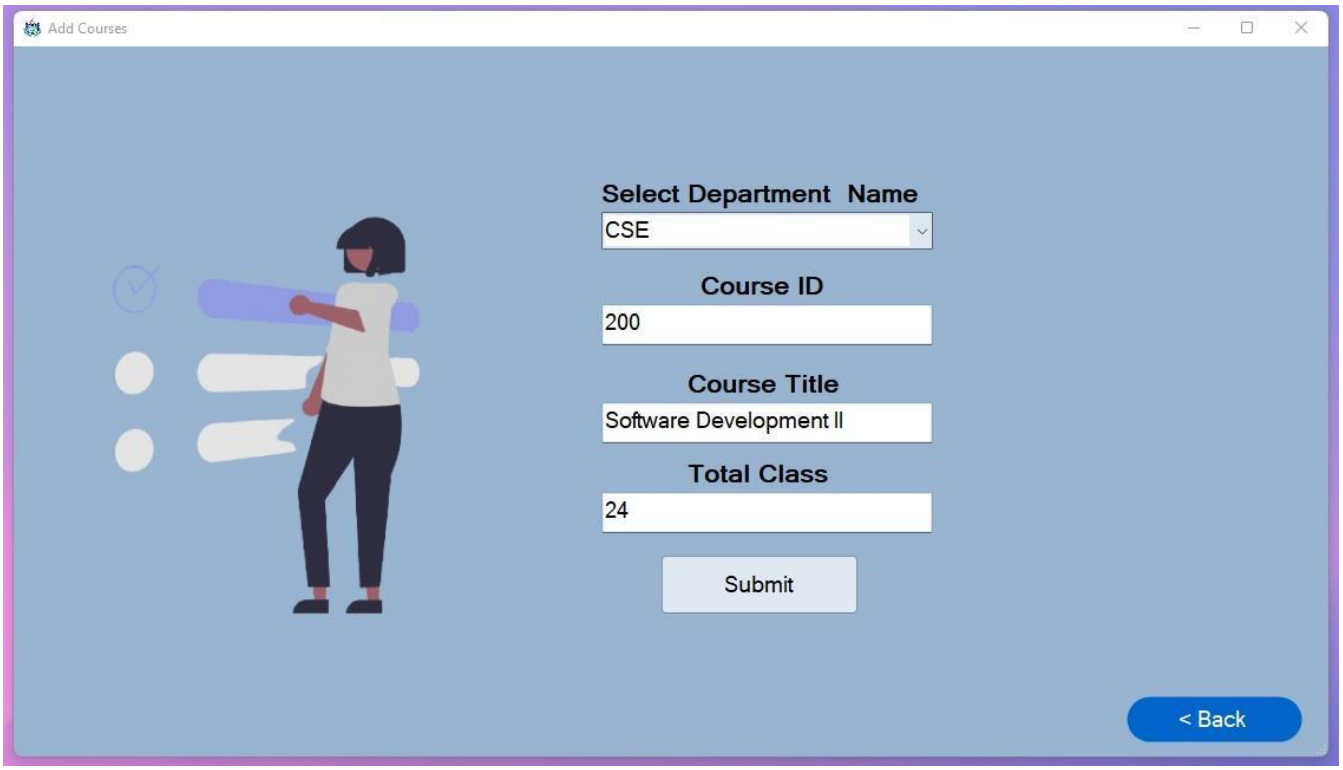


Figure 3.4.5: Add Courses

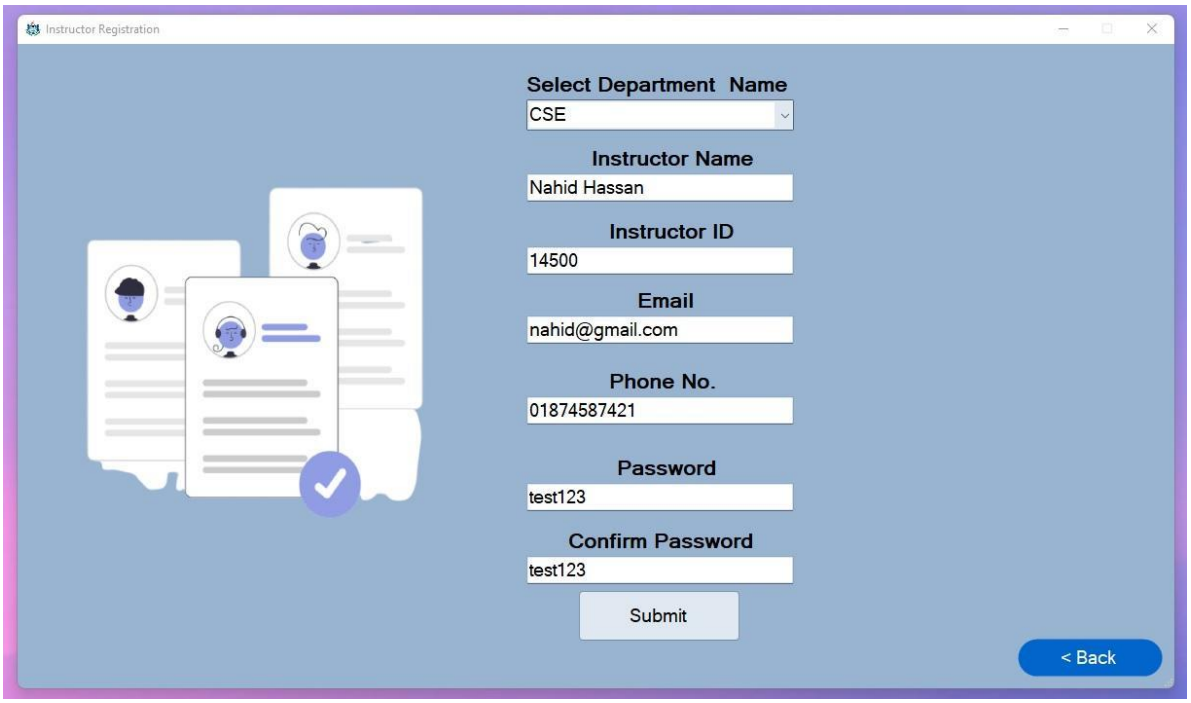


Figure 3.4.6: Instructor Registration

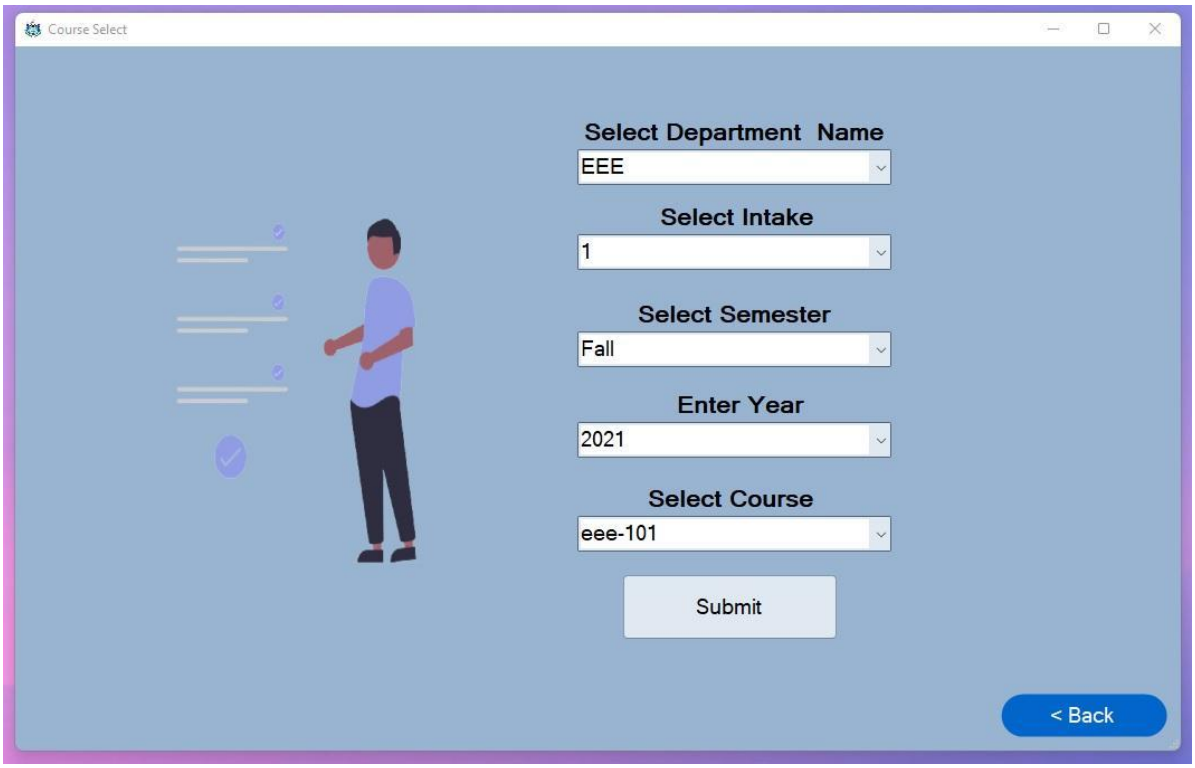


Figure 3.4.7: Course Select

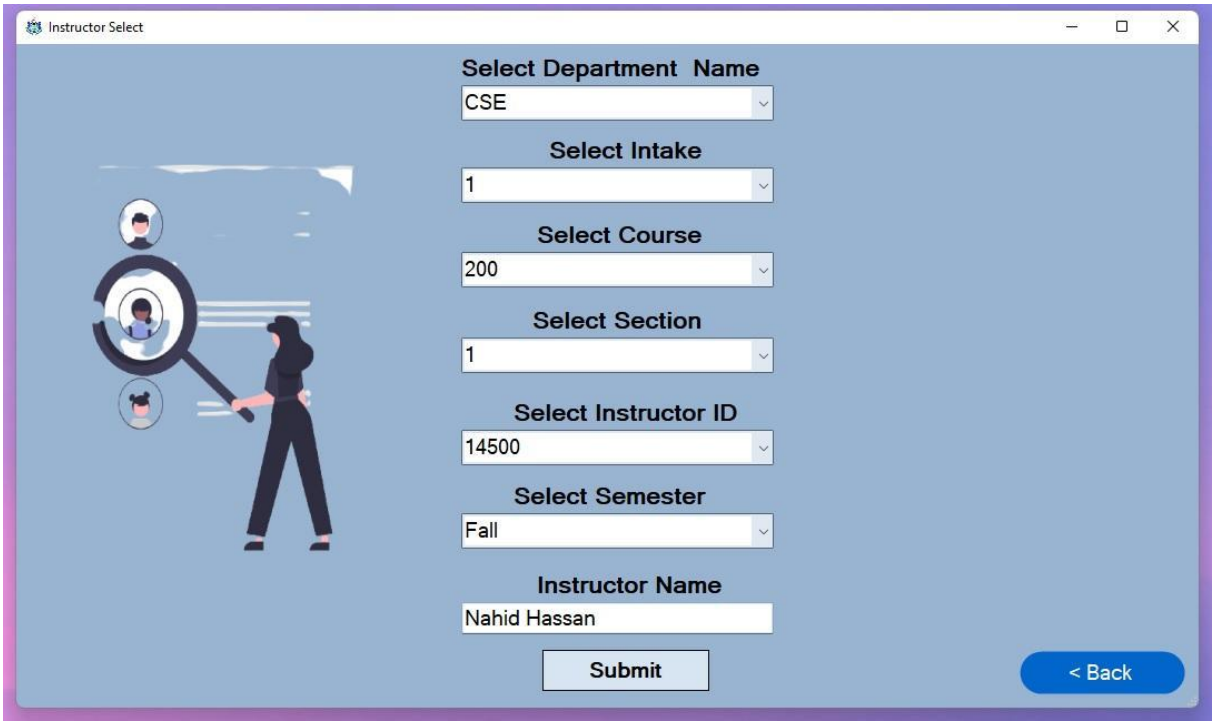


Figure 3.4.8: Add Courses

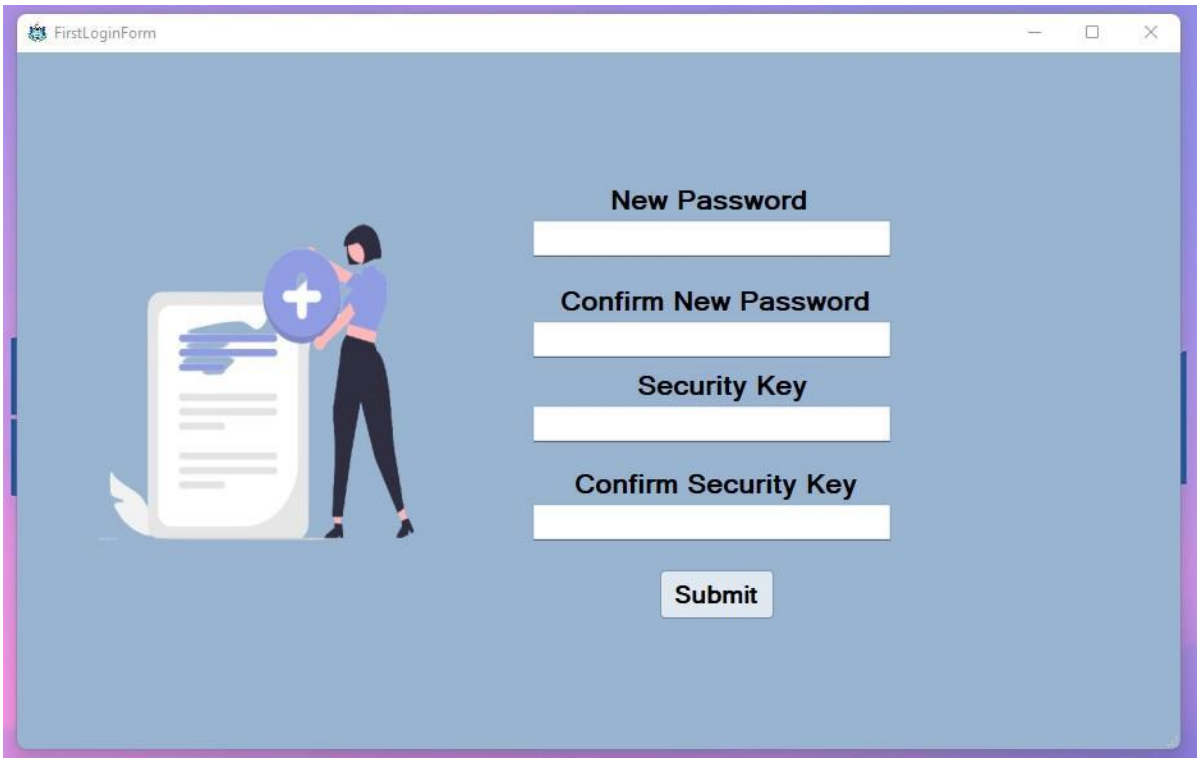


Figure 3.4.9: First Login

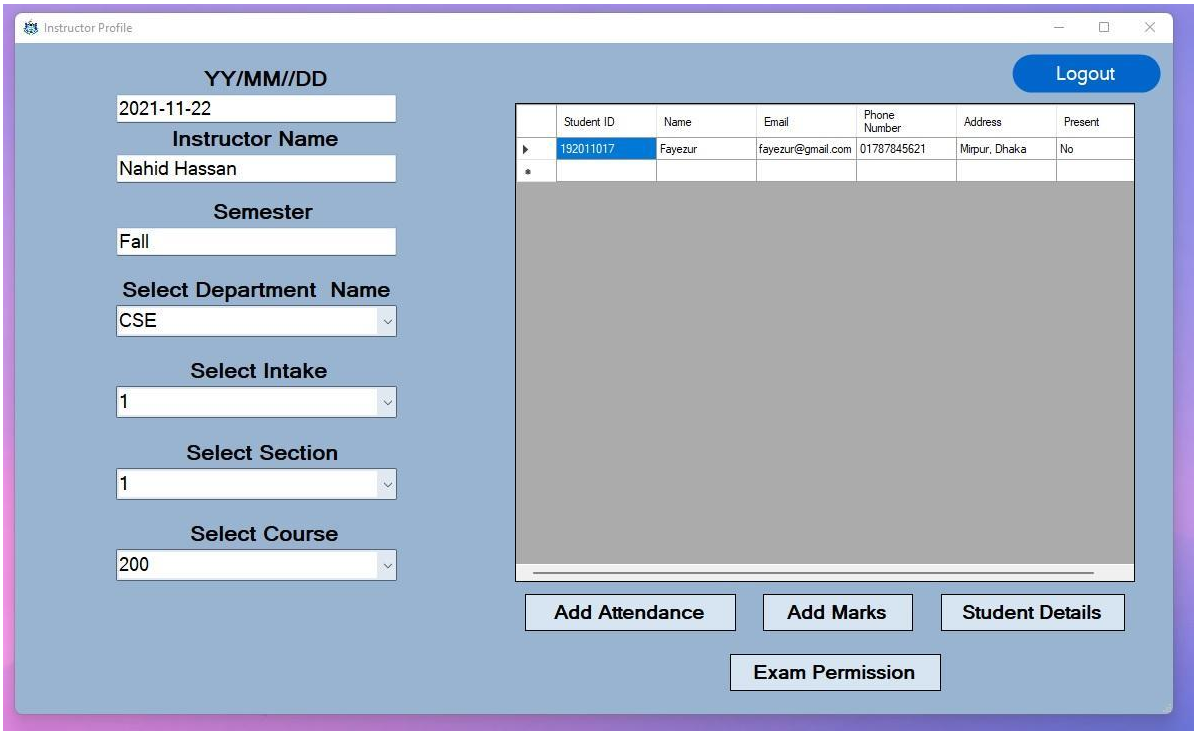


Figure 3.4.10: Instructor Profile

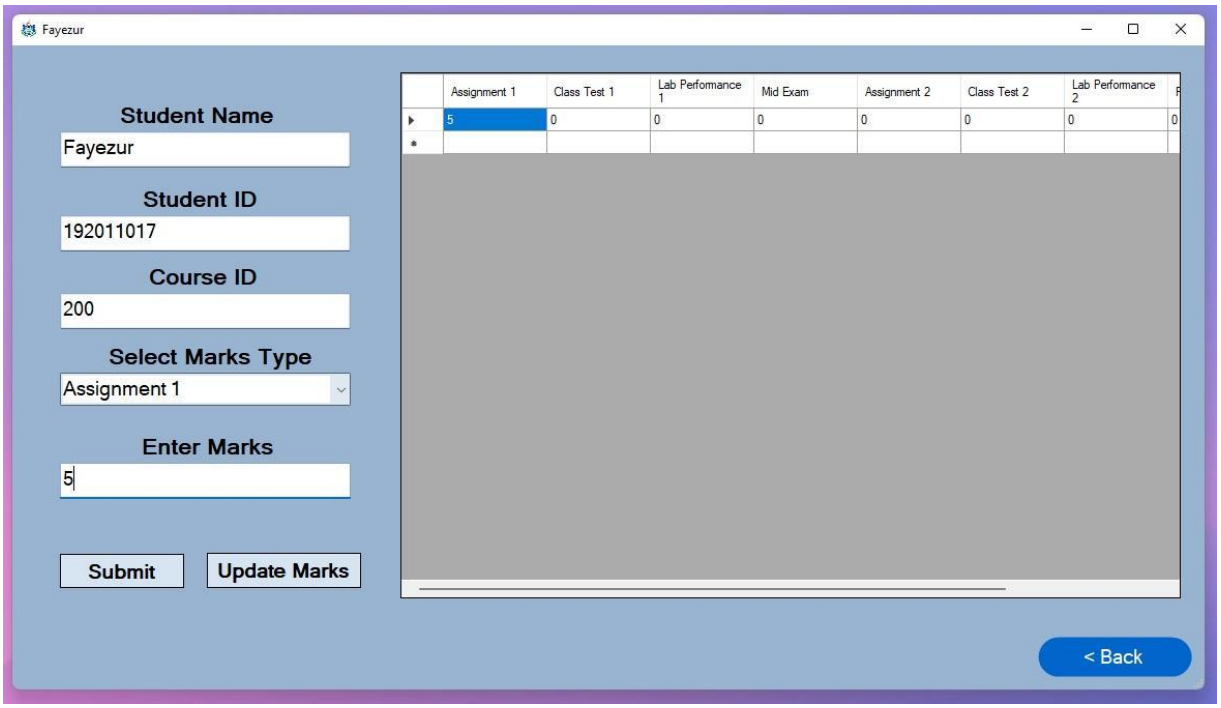


Figure 3.4.11: Add Marks

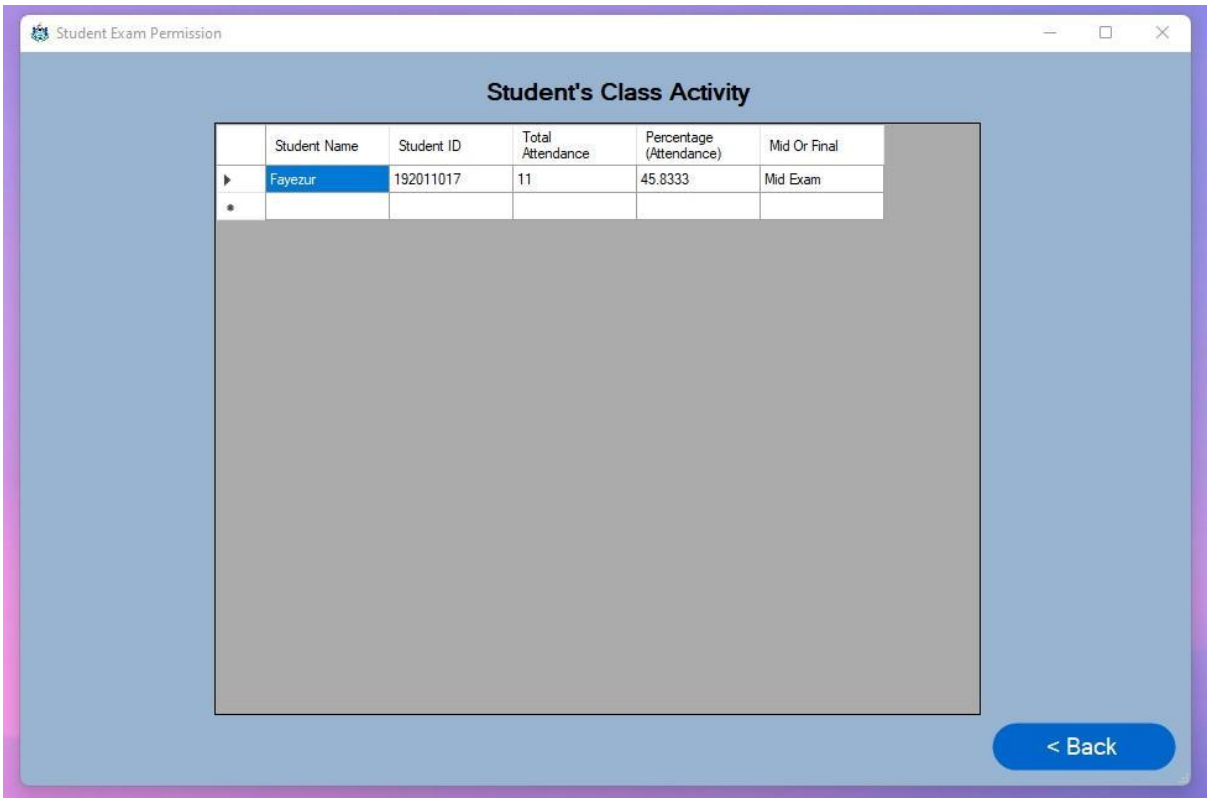


Figure 3.4.12: Student Exam Permission

Figure 3.4.513: Student Details

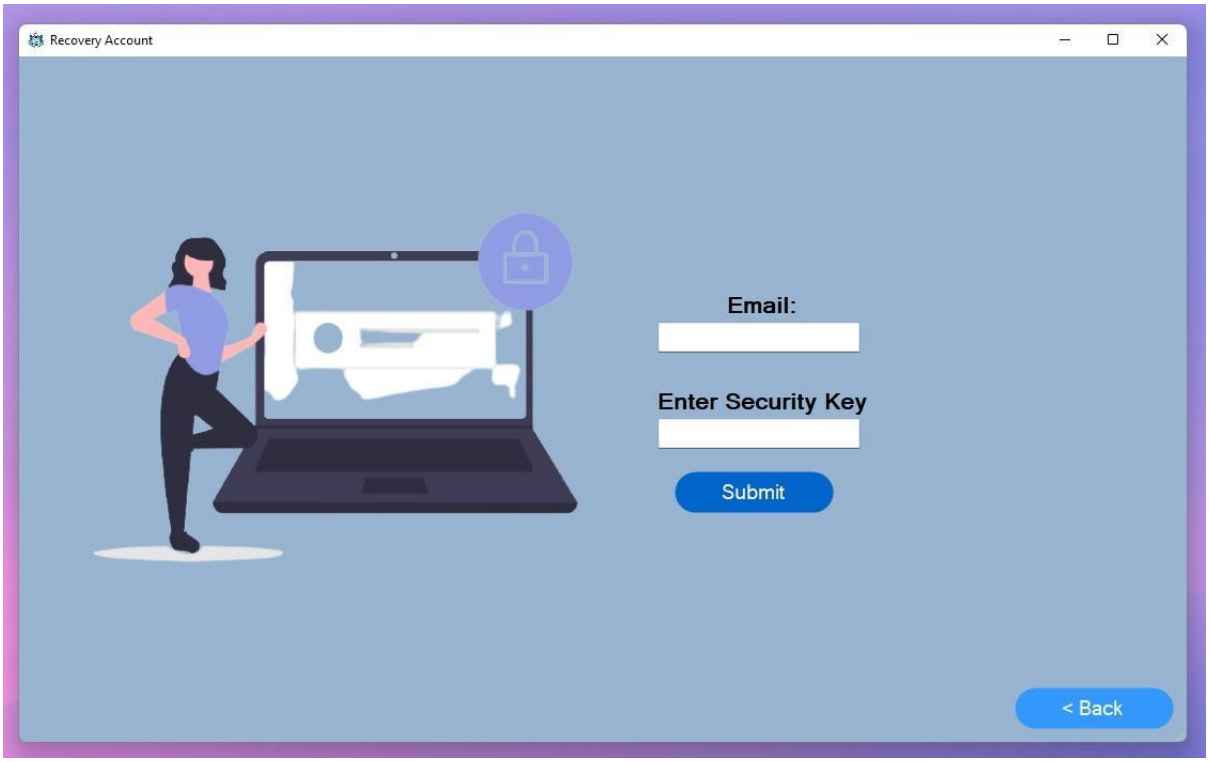


Figure 3.4.14: Recovery Account

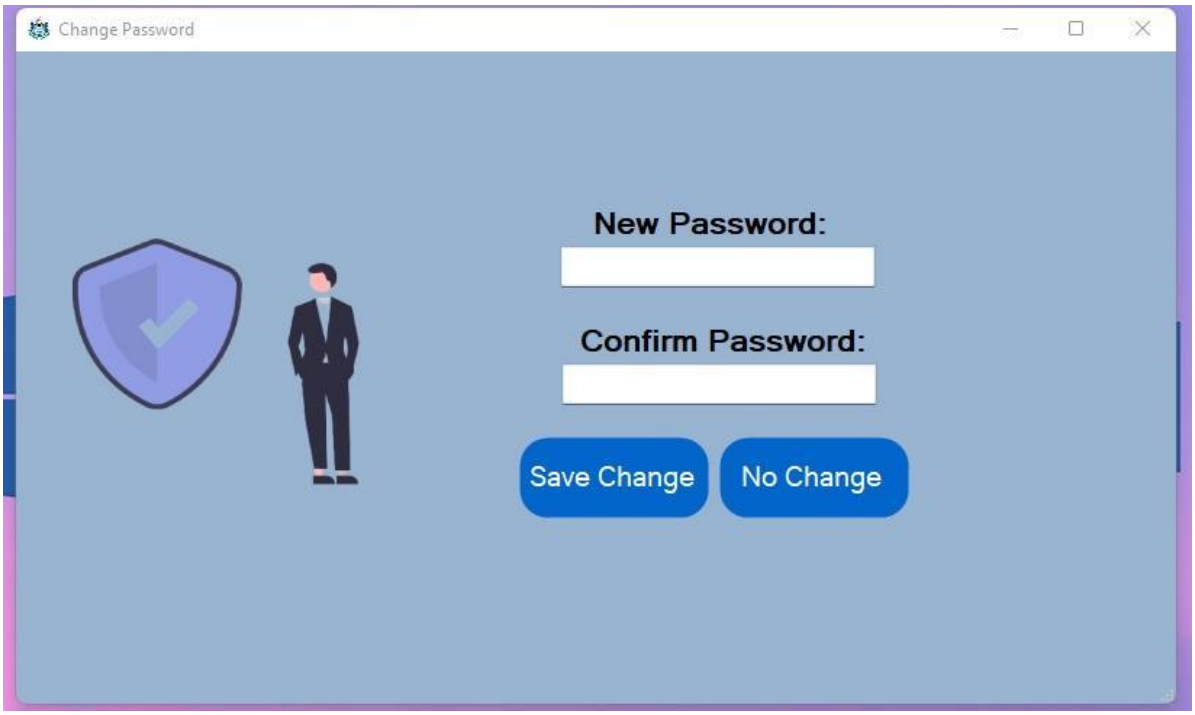


Figure 3.4.15: Change Password

3.6 Conclusions

From this chapter we have seen the Software's Flowchart, Hardware requirements, Software Requirements and also, it's Interfaces.

4.1 Conclusions

While working on this project we face lots of problems. We can't add password changing option. We can't delete any student information on this project. We can't see which student got the highest marks on the exam. On this software one student can't see other student results or any information. Admin can't add routines and Student can't know about faculty information. They cannot choice their desire courses.

4.2 Future Plan

We know that C# program has lots of features. So, our future plan is to build this project as Online using ASP.NET (C# Framework). In future we want to add more features like

- A Dedicated Panel for Student
- Student can create their own Account
- A Dedicated Panel for Intake In-Charge
- Faculty members information