EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

Department of Software Engineering

COMP 337

DATABASE MANAGEMENT SYSTEMS

TERM PROJECT

DATABASE APPLICATION DEVELOPMENT

Prepared by Ali Hikmet Keklik (180151) - Ali Can Doğan (180343)

Submitted to Dr. Ferhun Yorgancıoğlu

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1. INTRODUCTION

This project is about designing a simple University Management System using database management and programming language features. Basically, University Management System increases knowledge sharing between student and teacher and facilitates some useful operations. The system is managed by the Faculty Coordinator (detailed information in Users 1.3)

1.1 PROJECT GOAL

In this project, main goal is develop a simple University Management System application using modern programming tools and database management system.

1.2 LANGUAGES AND PROGRAMS

Programming Language	Database Management System	Compiler
C++	MySQL	Visual Studio 2019

1.3 USERS

There are 3 different users in this project. They have some authority which are;

- Faculty Coordinator:
  - Log in to the system
  - Add a new course
  - Add a new teacher
  - Add a new student
  - Assign courses to instructors (teaching)
  - Assign instructors to students (advisory)
- Instructor:
  - Log in to the system
  - See and update personal details
  - See the courses assigned
  - See course details (course info, list of students registered, etc.)
  - Register students to the courses
- Student:
  - Log in to the system
  - See and update personal details
  - See the courses registered
  - See the other students registered in the class

1.4 TASK DISTRIBUTION

- **There was continually communication and cooperation at all stages.**

Student No	Student Name	
180151	ALİ HİKMET KEKLİK	• Database process • MySQL and Visual Studio Connection
180343	ALİ CAN DOĞAN	• Interface design • Report design

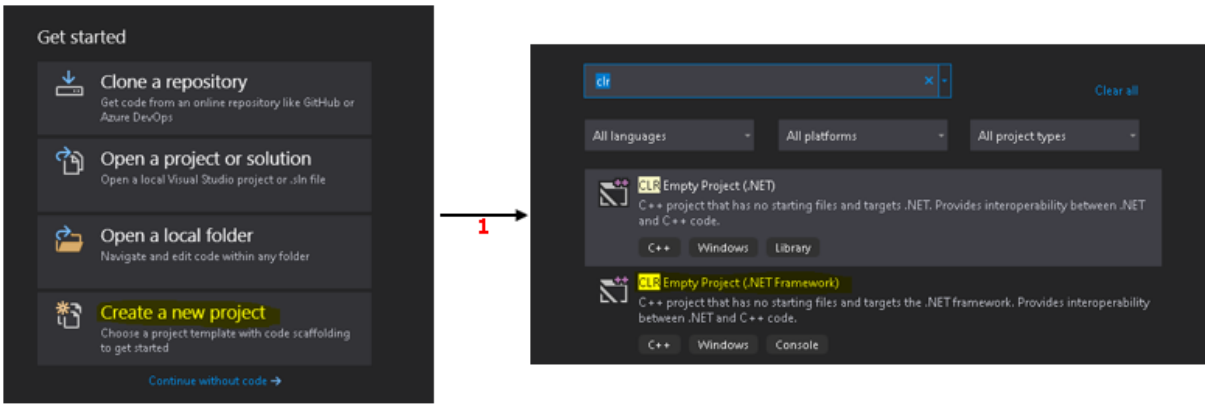
2 VISUAL STUDIO 2019

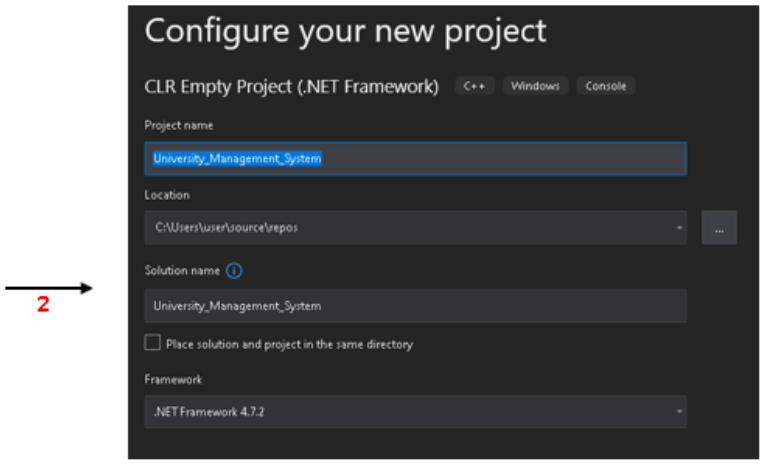
Why Visual Studio?

- It is free,
- It supports many programming languages,
- Syntax highlighting,
- Bracket-matching,
- Auto-indentation,
- Box selection,
- Snippets and more...

Lets create a new empty project for our system.

2.1 CREATE A PROJECT

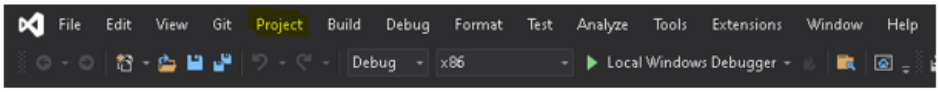


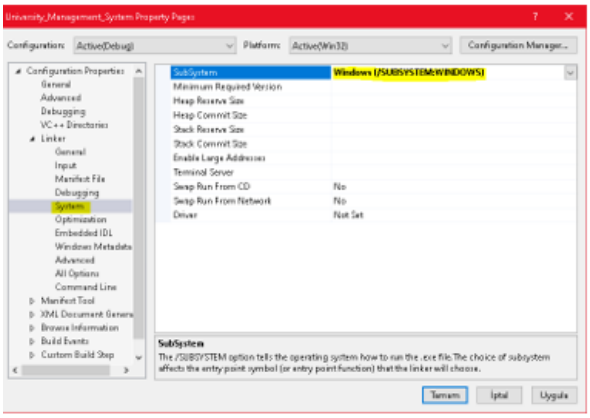


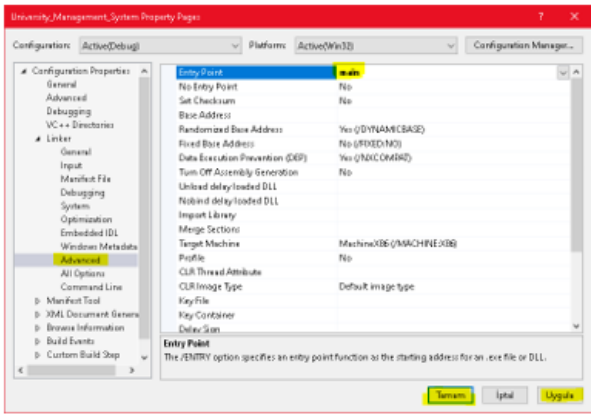
Firstly, create a new project and then select CLR Empty Project(.NET Framework). Now, you can give a name for your project.

2.2 VISUAL STUDIO 2019 SETTINGS

Firstly, create a new project and then select CLR Empty Project(.NET Framework). Now, you can give a name for your project. From the linker section click System and change the SubSystem to the Windows (/SUBSYSTEM:WINDOWS). From the advanced section click Entity Point and write main. Apply and press ok.

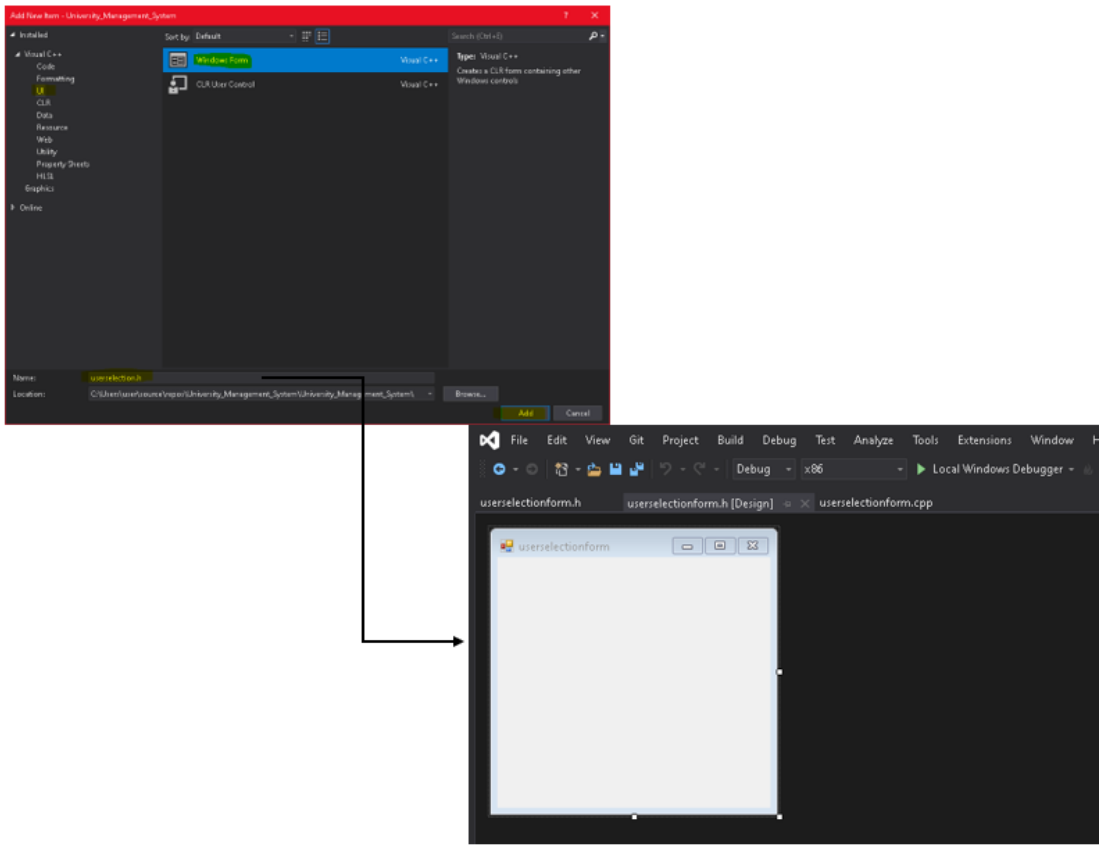






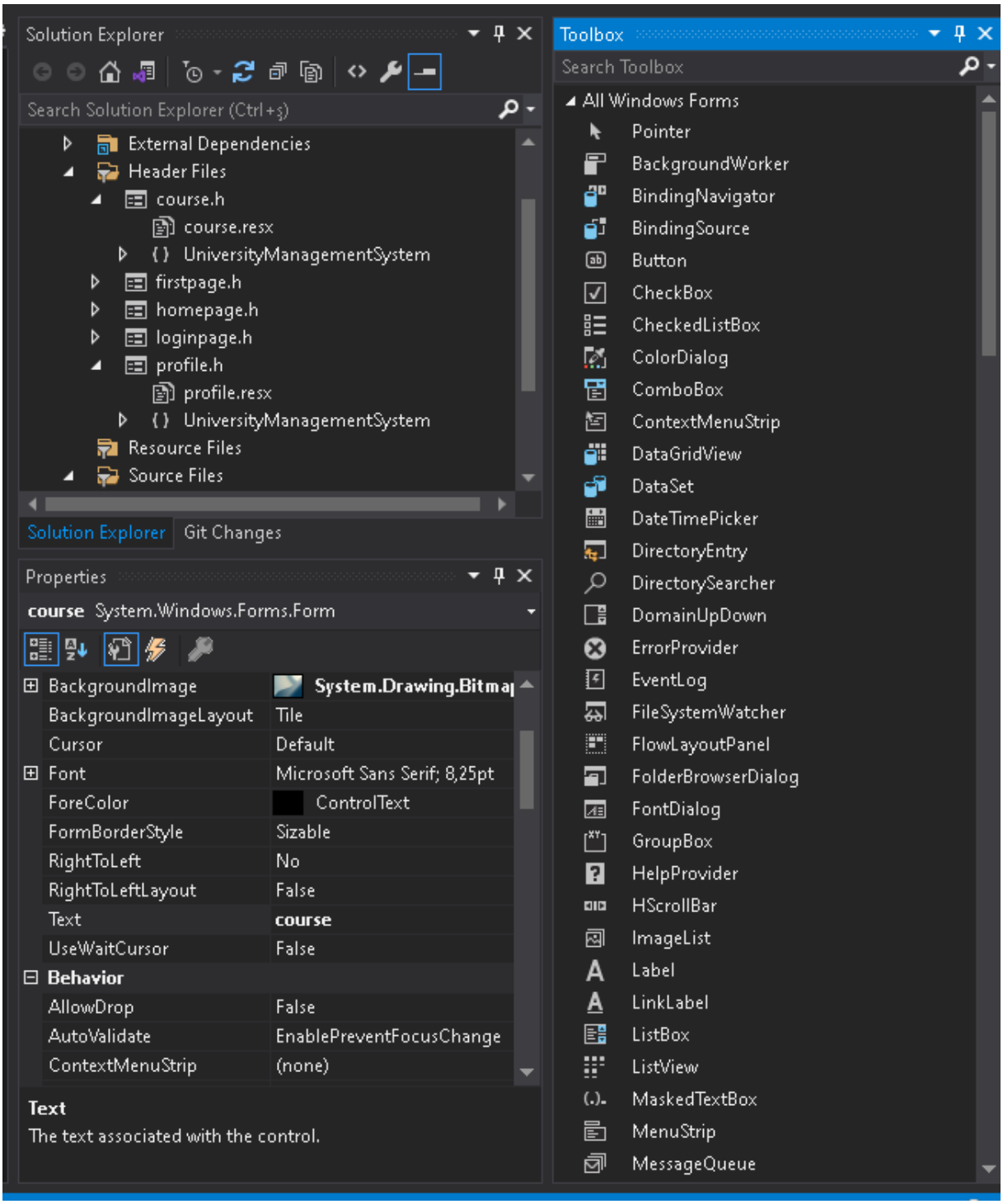
2.3 CREATING FORM

Click project and then push the add a new item button then you will see them.



2.4 VISUAL STUDIO TOOLS

In Visual Studio there are many useful tools.You can easly manage your project on Solution Explorer. When you click something in your form you can edit it in properties part. Toolbox, allows you to add tools to your form.

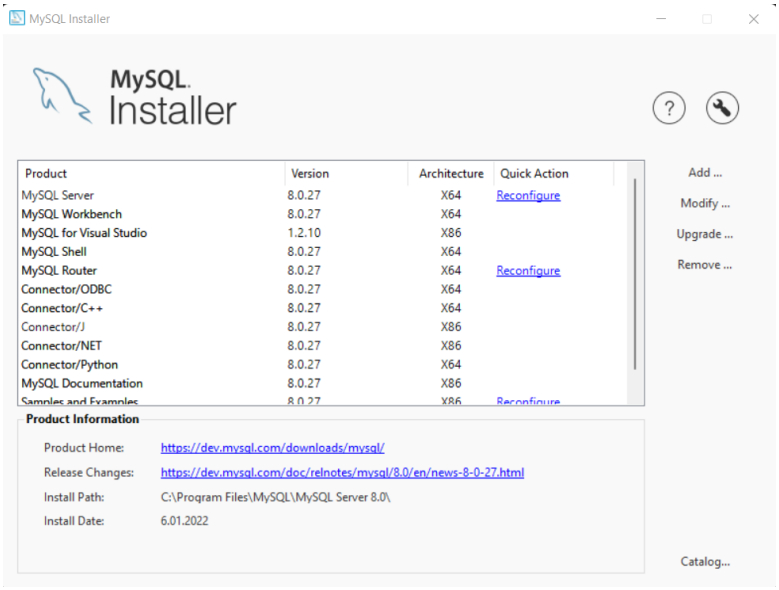


3 MYSQL

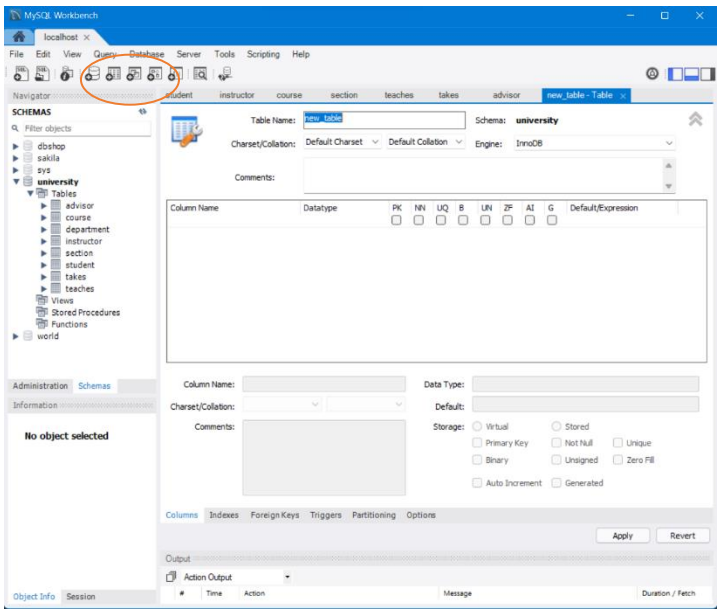
Why MySQL?

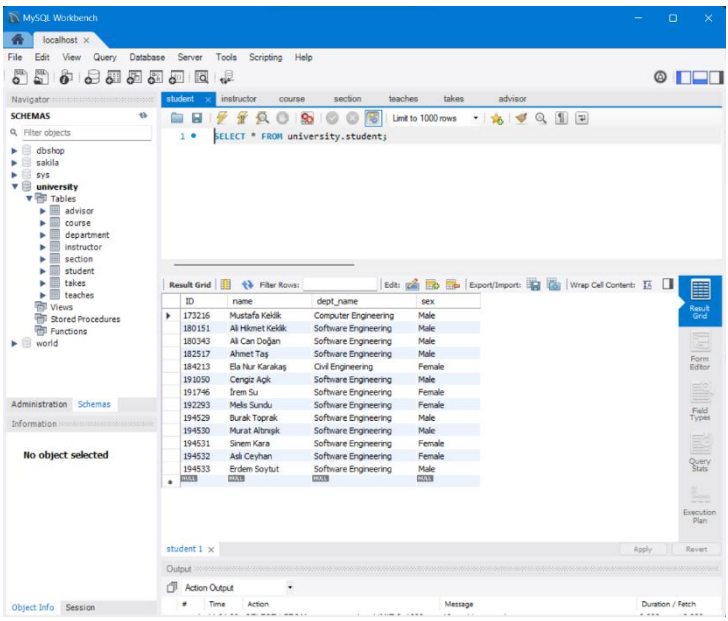
MySQL is the most widely used database development application in the world. There are many reasons for this, to provide comprehensive support for every application development need, to be easily integrated are a few of them.

3.1 MySQL INSTALLATION



3.2 CREATING TABLE





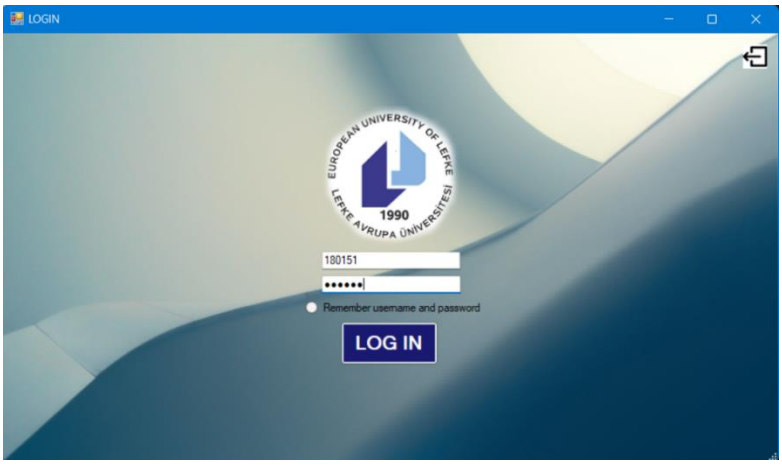
4 INTERFACE DESIGN

4.1 USER SELECTION PAGE

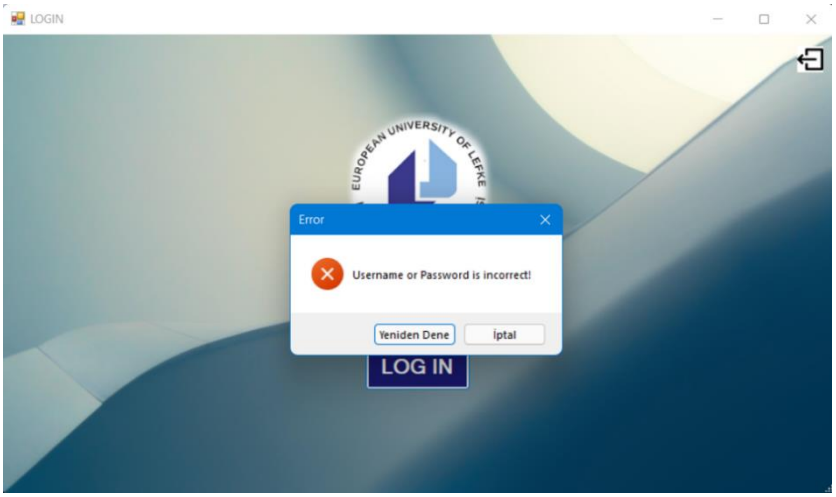
4.1.1 DEFAULT USER PASSWORDS

FACULTY COORDINATOR	INSTRUCTOR	STUDENT
Username:admin **Password:password**	**Username:Instructor ID** **Password:123**	**Username:Student ID** **Password: Student ID**

4.2 LOGIN PAGE



4.2.1 LOGIN PAGE ERROR



4.3 HOMEPAGE

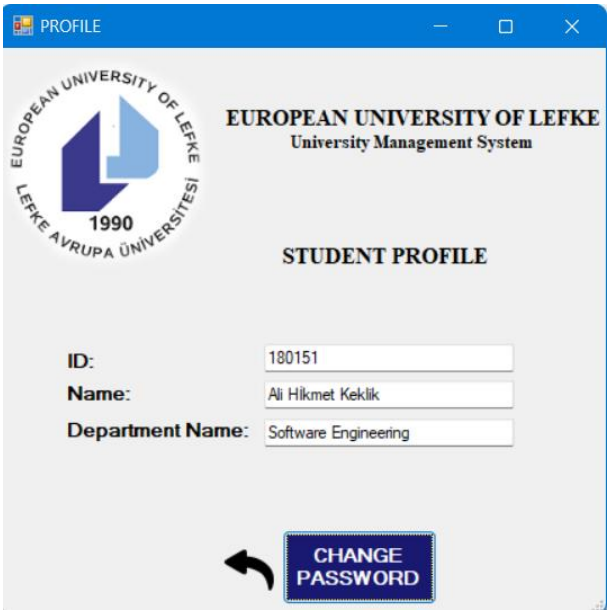
4.3.1 STUDENT HOMPAGE

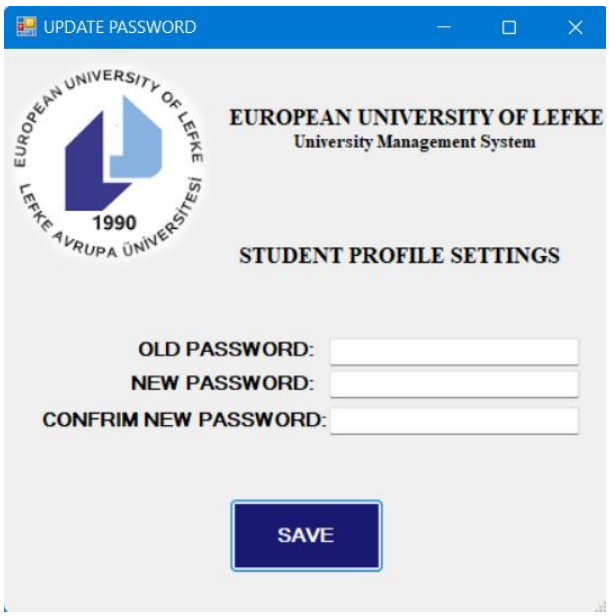
4.3.2 INSTRUCTOR HOMEPAGE

4.3.3 FACULTY COORDINATOR HOMEPAGE

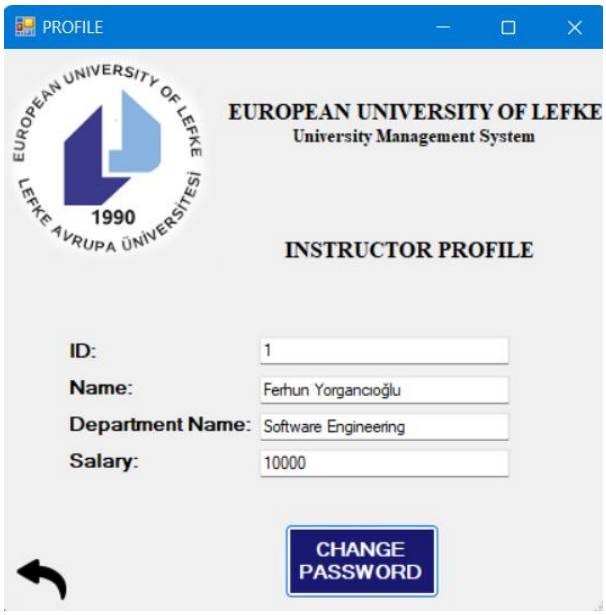
4.4PROFIL PAGES

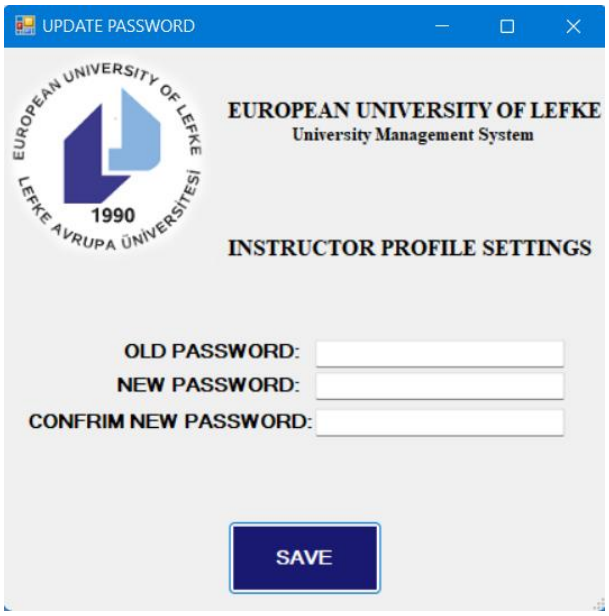
4.4.1 STUDENT PROFILE AND UPDATE PASSWORD PAGE





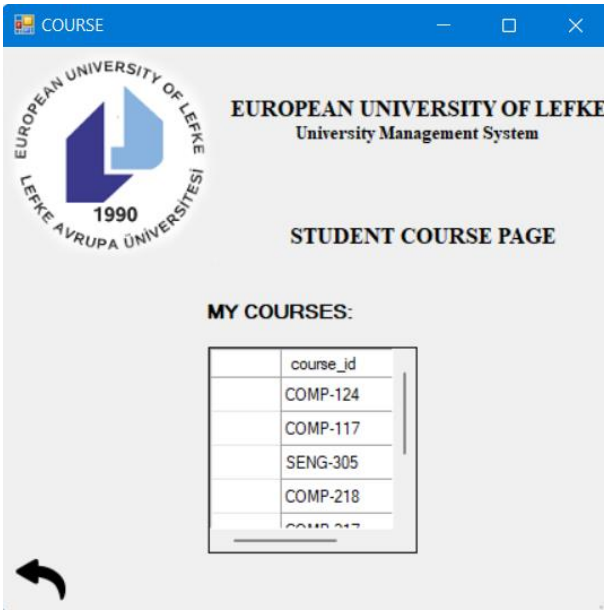
4.4.2 INSTRUCTOR PROFILE AND UPDATE PASSWORD PAGE



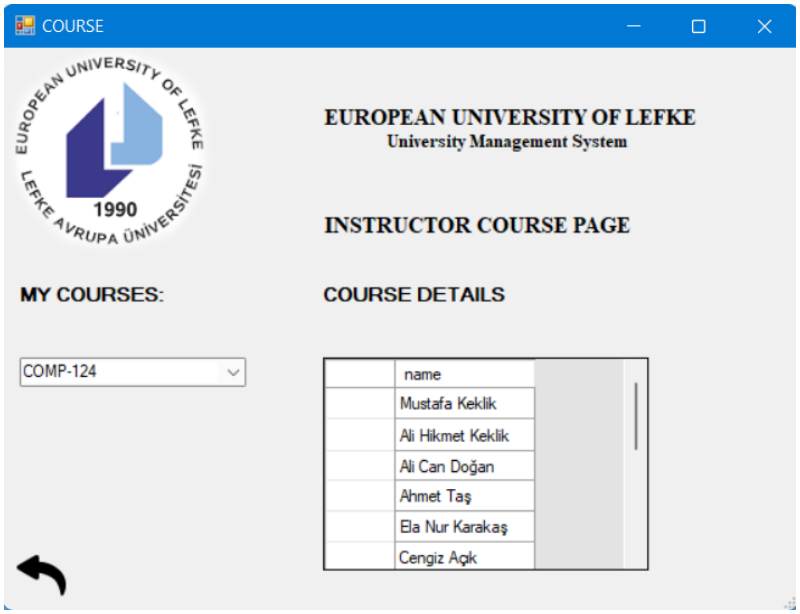


4.5 COURSE PAGES

4.5.1 STUDENT COURSE PAGE

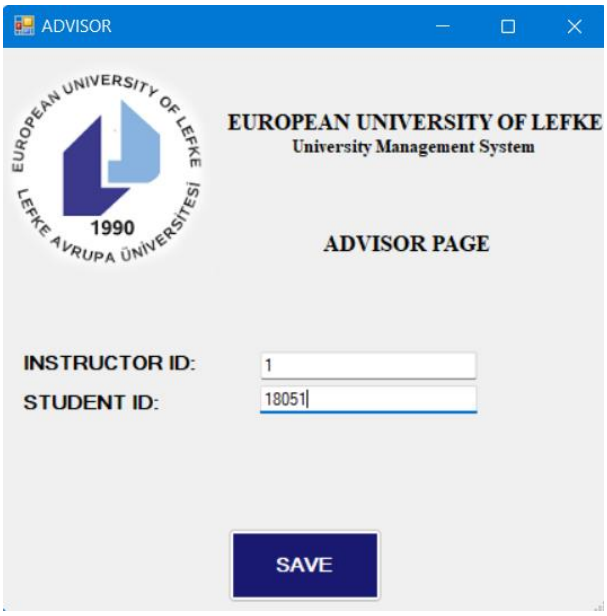


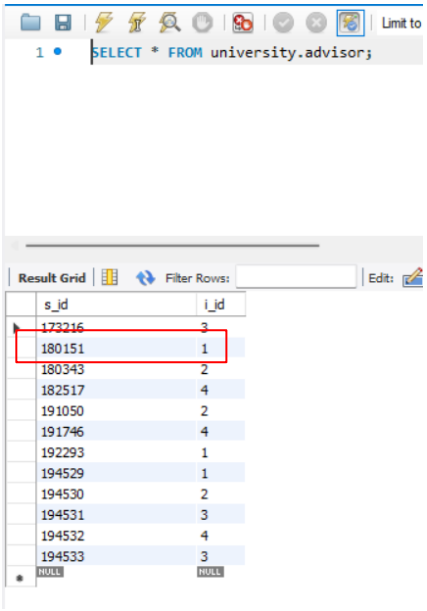
4.5.2 INSTRUCTOR COURSE PAGE



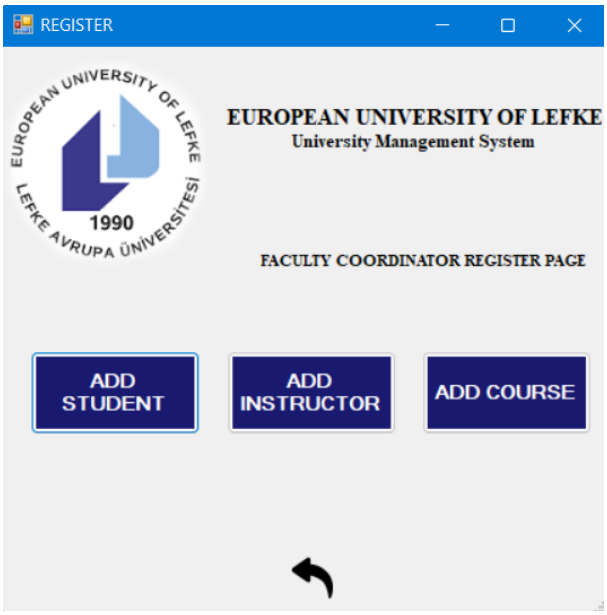
4.6REGISTER PAGES

4.6.1 ADVISOR REGISTER PAGE

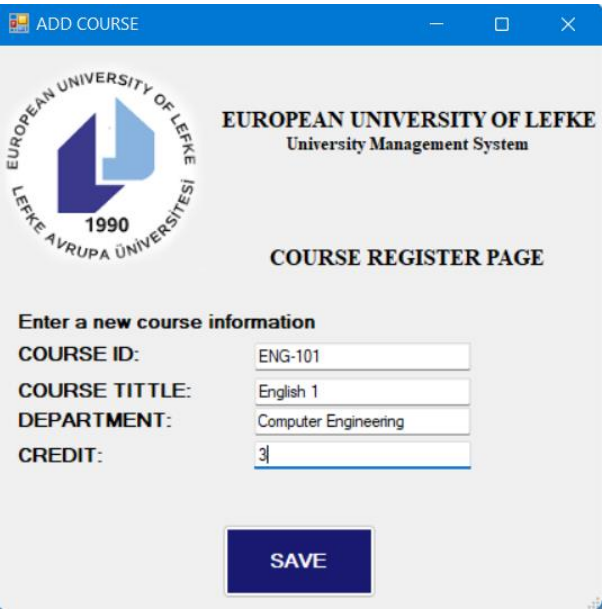


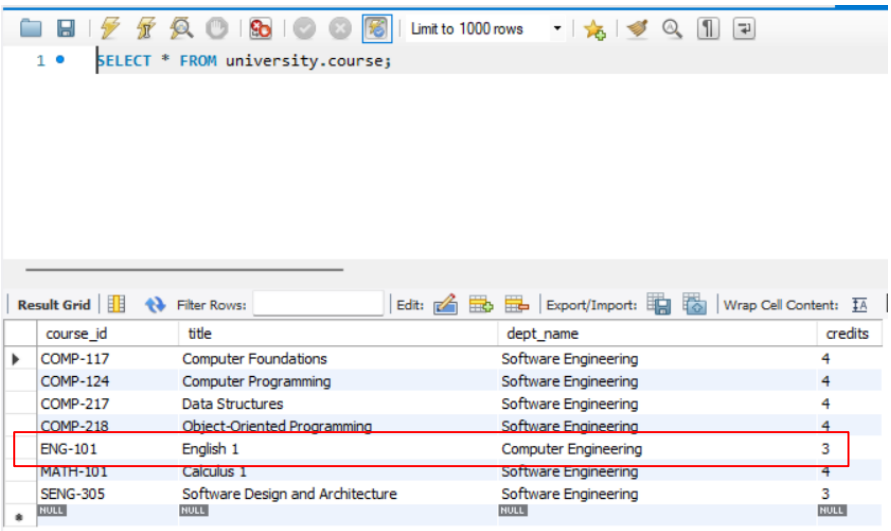


4.6.2 FACULTY COORDINATOR REGISTER PAGE

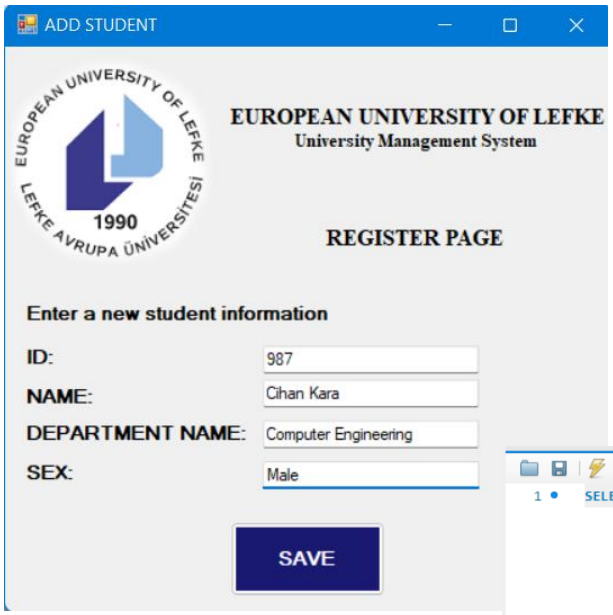


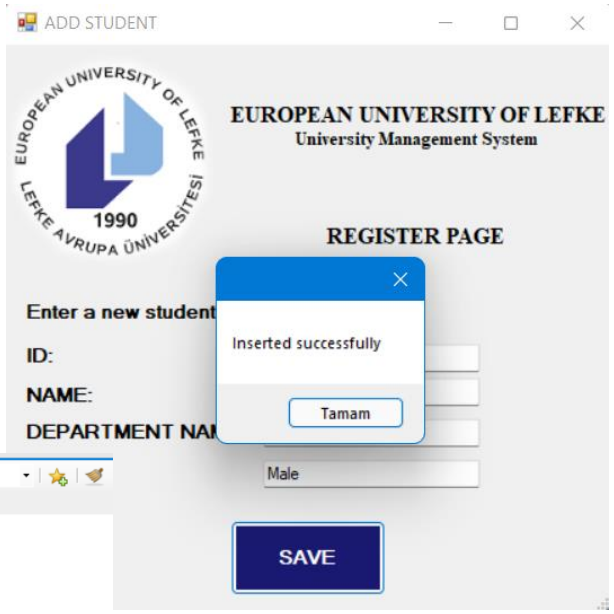
4.6.2.1 ADD A COURSE PAGE

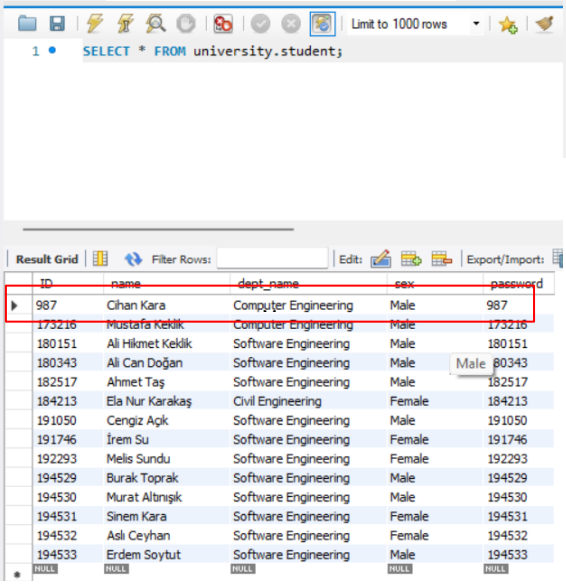




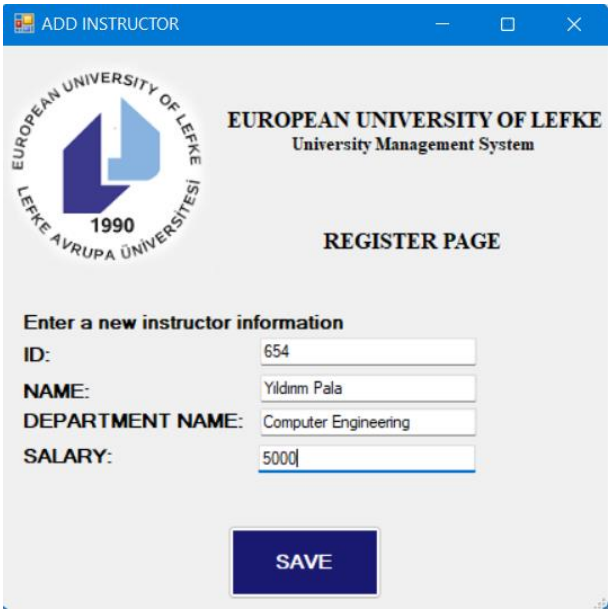
4.6.2.2 ADD A STUDENT PAGE

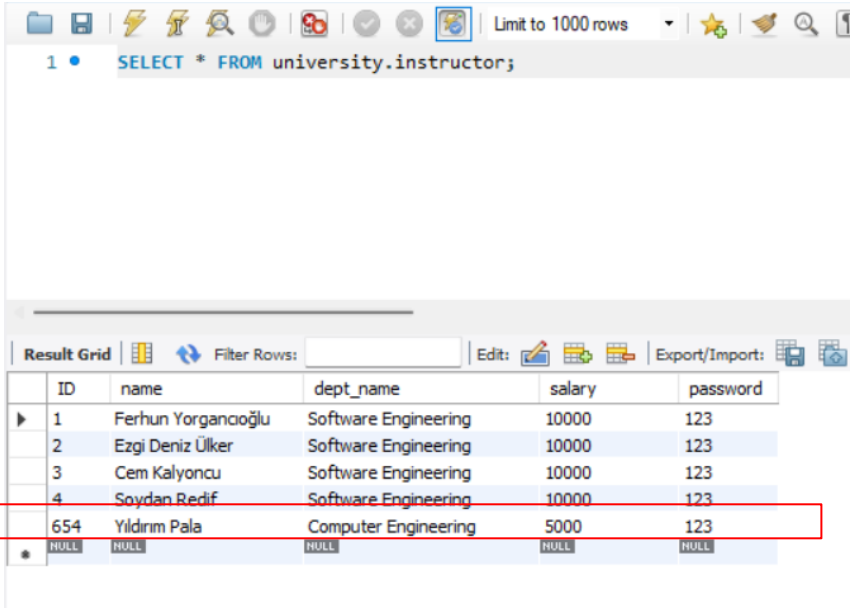




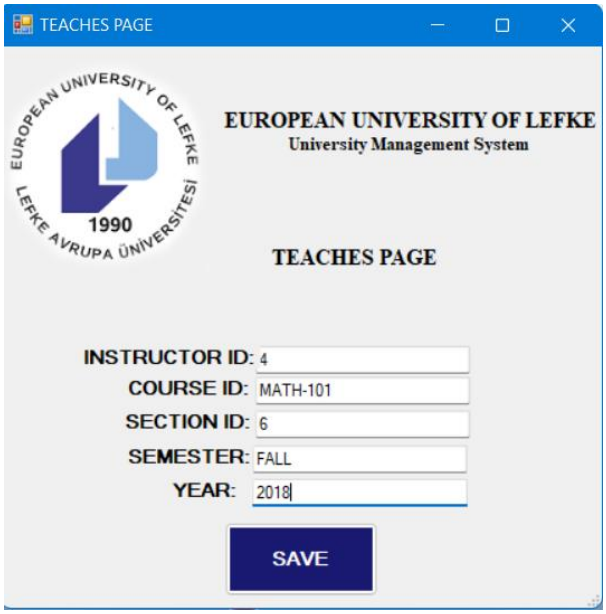


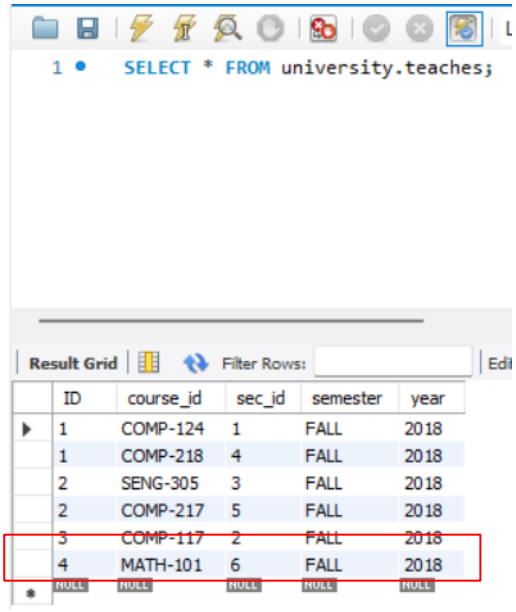
4.6.2.3 ADD A INSTRUCTOR PAGE





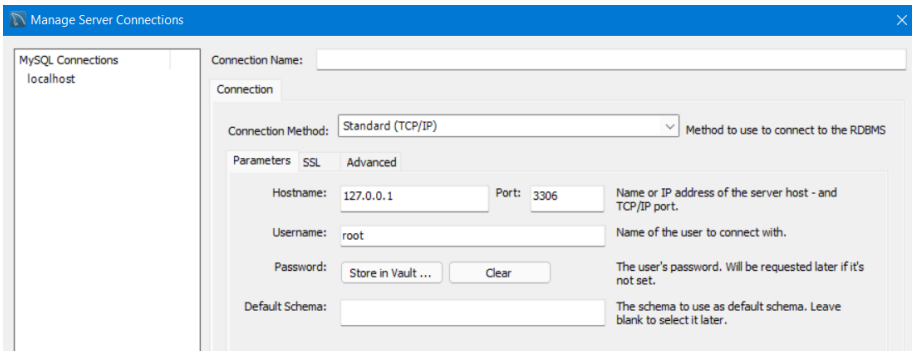
4.6.3 TEACHES PAGE



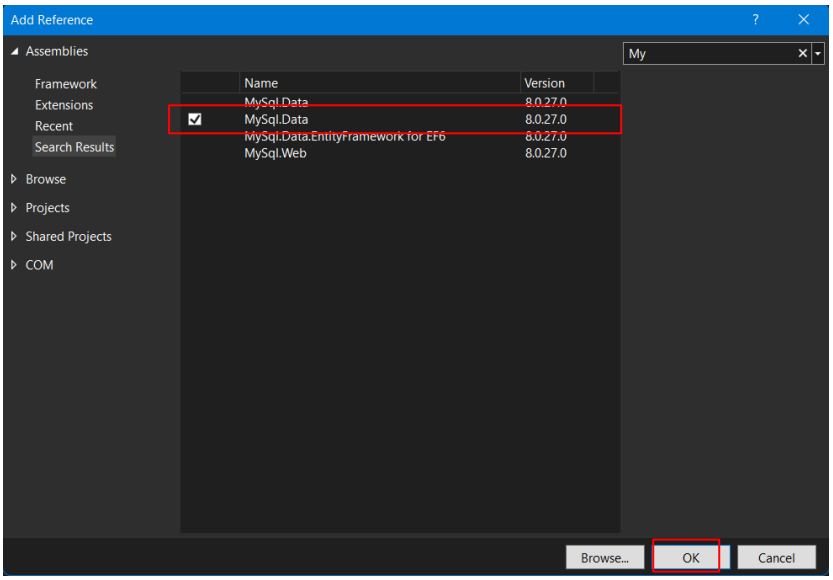


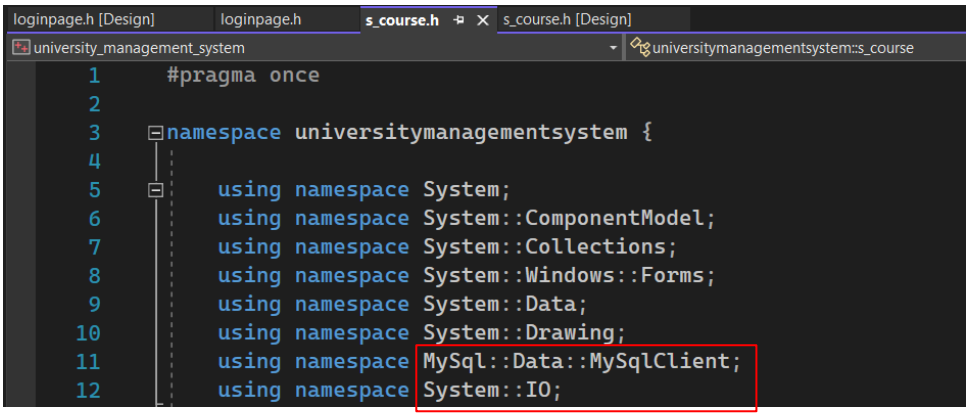
5 COMBINING INTERFACE AND DATABASE

5.1 MySQL CONNECTION



5.2 VISUAL STUDIO CONNECTION






```
#pragma endregion

        String^ connString = "Server=localhost;port=3306;database=university;uid=root;password=167349";
        MySqlConnection^ conn = gcnew MySqlConnection(connString);
```

6 CONCLUSION

The system is connected to the database, the interface is designed and ready to use. During the project, a lot of progress was made in interface design and database operations with MySQL. There were some difficulties, the connection of the database and the codes written through visual studio and the data reading and data saving processes were integrated into the project after long efforts. Users have different features according to the system. Faculty coordinator can add a new course, teacher and student, assign lecturers (teaching) and lecturers to students (advisory). The instructor can view and update their personal information, as well as view their own lessons and details. The student can view and update their personal information, and view the registered courses. As a result,in this project University Management System was created. All stages are explained in detail.

7 REFERANCES

1. https://stackoverflow.com/questions/1186017/how-do-i-build-a-graphical-user-interface-in-c
2. https://www.simplilearn.com/tutorials/cpp-tutorial/cpp-gui?source=sl_frs_nav_playlist_video_clicked
3. https://stackoverflow.com/questions/16049859/c-program-that-connects-to-mysql
4. https://www.codeguru.com/cplusplus/interfacing-mysql-connector-c-with-the-qt-framework/
5. https://www.bogotobogo.com/cplusplus/application_visual_studio_2013.php
6. https://docs.microsoft.com/en-us/cpp/windows/walkthrough-creating-windows-desktop-applications-cpp?view=msvc-170