



Prg252

Assignment 2

Milestone1

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Introduction:

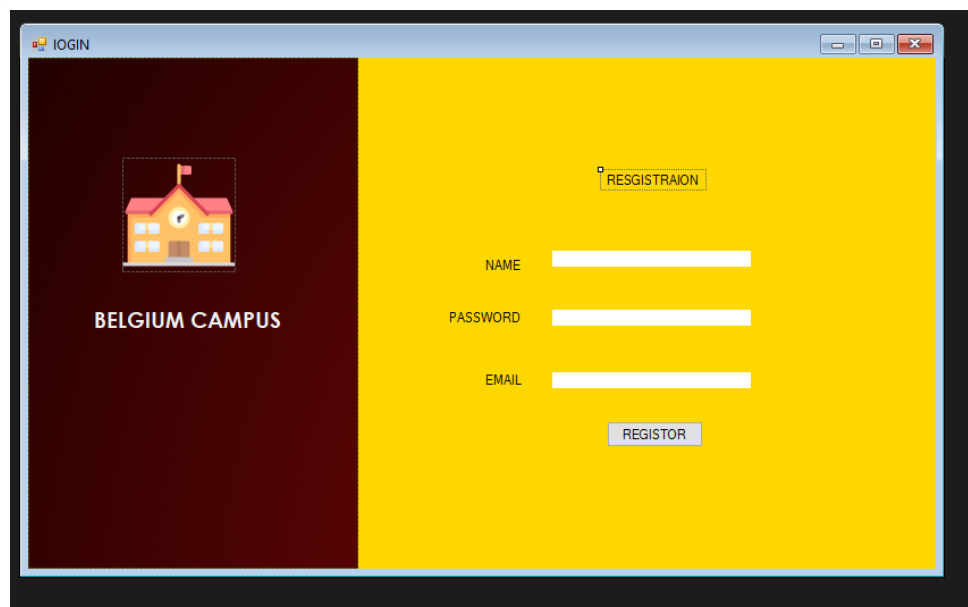
Belgium Campus has given us a task to create an application to manage Student Credentials. The result will be a fully functioning windows form application that will give the user the ability to record student and module information into a ready-made database that was created in Microsoft SQL Server.

What needs to be in the application:

- Windows Form GUI
- CRUD methods
- ADO.net
- SQL Database

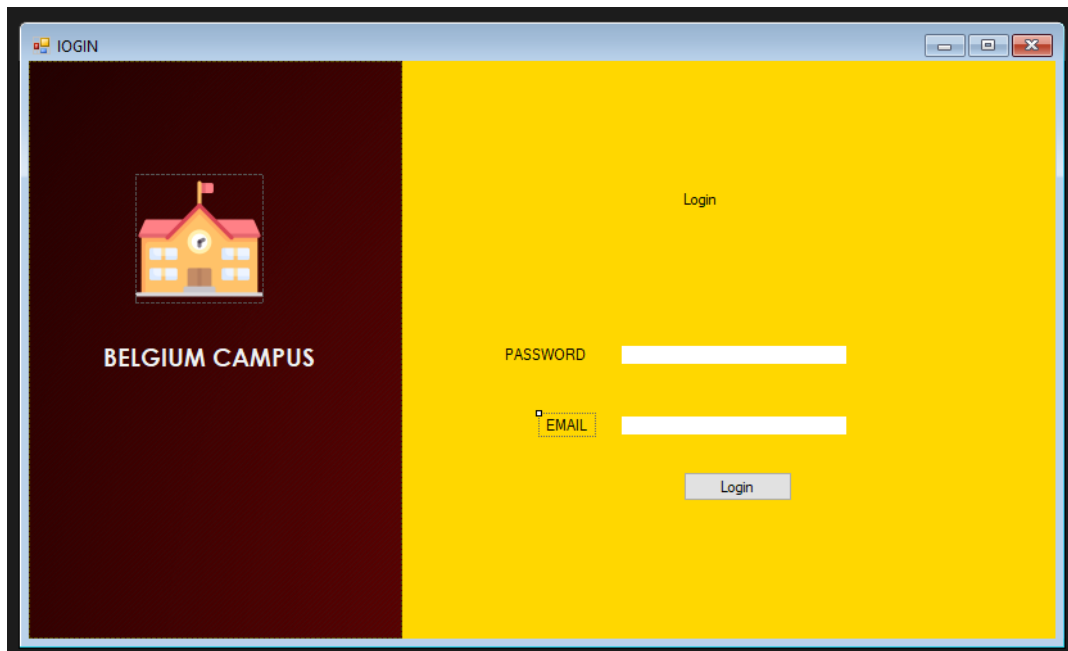
Interface run through:

Login /Register



What user can do:

- The user must register first then login.
- If info was stored correctly the user will be able to see a message box that will appear Infront of the registration page which will redirect them to the login page.




The following can/will be done on the form:

- User login will be required but that is if they already registered.
- After login the window will open to admin dashboard.
- Storage of login credentials on text file.

Text File

The text file storage example.

 *Storage.txt - Notepad

File Edit Format View Help

Name: Charmaine ,Email: charmaine@gmail.com, Password: 1001
Name: Lethabo, Email: lethabo@gmail.com, Password:20145

Dashboard

The screenshot shows a web application window titled "Form1". The interface is divided into a dark red sidebar on the left and a yellow main content area on the right. The sidebar contains a school icon, the text "Belgium Campus", and two menu items: "Student Credentials" (which is highlighted) and "Module". The main content area features a search bar at the top right with a "SEARCH" button. Below the search bar, there are form fields for "STUDENT no.", "NAME", "SURNAME", "IMAGE" (with a dashed box for image upload), "DOB", "PHONE", "ADDRESS", "GENDER" (a dropdown menu), and "MODULE CODE". An "INSERT" button is positioned below the "IMAGE" field. To the right of these fields is a large, empty grey rectangular area, likely a DataGridview. At the bottom of the main content area, there are three buttons: "CREATE", "UPDATE", and "DELETE".

Form tasks that users can do:

- DataGridview: will have student credentials.
- Search bar: identifications search and display.
- Create: Insertion of student credentials in data grid and stored in sql database.
- Updating student information.
- Deletion of students
- uploading images onto the dashboard

Modules

Modules

SEARCH By Module no.

SEARCH SEARCH

Module code

NAME

Description

SEARCH ID

Delete

Update

Create

What user can do:

- Adding of a new module: if the insertion of the module information was correctly done, there will be a “added” message box popping up or else there will be a “failed to add” message box appearing on the screen.
- User will be able to remove modules.
- User will be able to search and find module using ID.

Classes

1. Class – Registration
2. Class – Login
3. Class – FileHandler
4. Class –Modules
5. Class – Students
6. Class – Database_Handler

Registration

- The registration class is used for registering a brand new Data that is captured with all the necessary members. It is considered the parent of both the login class and the Forgot_Password class. The Registration class will have a single method to format the data that will be stored later within a text file.

Login

- The purpose of a login in class in this system acts a categorising tool for events being the data captor work into the system. Only the username and password shall be considered for validation, which the login class will inherit those fields from the Registration class an override the function

FileHandler

- The main function of the filehandler class is to actually perform the necessary file methods, for example reading and writing from a text file.

Modules

- The Modules class is actually used for registering a brand new Module with all the required members in it. It is the parent of the Students class. Every module from the Module class shall be saved on the SQL Server.

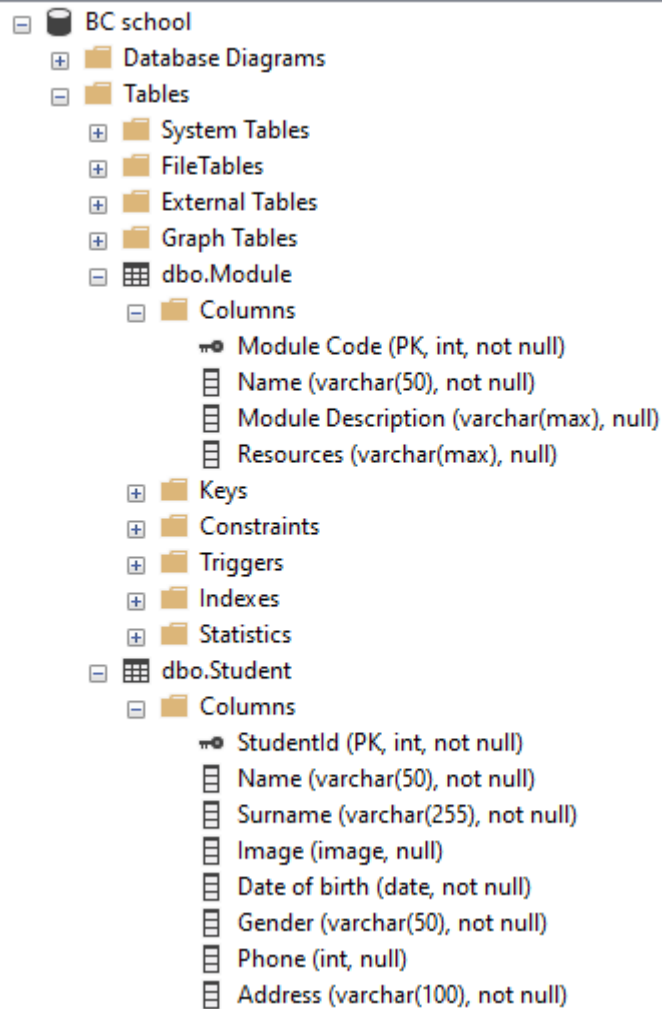
Students

- The students class is purposed for registering a brand new Student with all the required members. Each student from the students class will be saved on the SQL Server.

Database_Handler

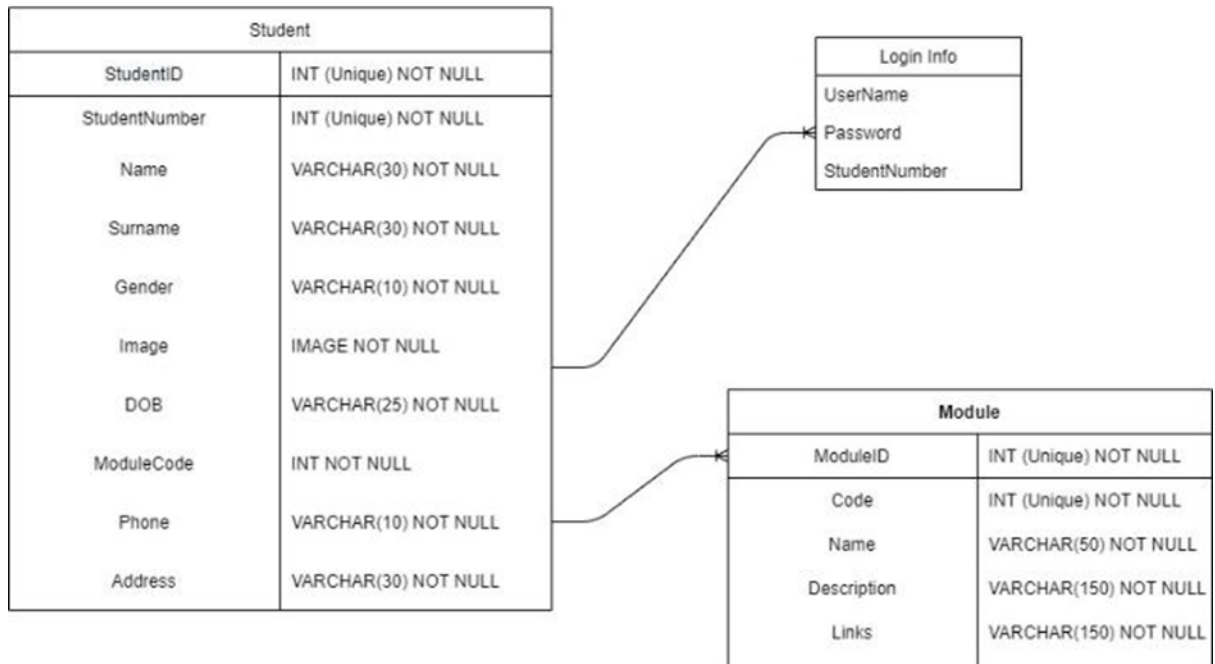
- The Database_handler class main function is to perform the required SQL function known as CRUD. It will only inherit the read method from the IRead interface class. This will also be the one that will communicate with the relational database using ADO.NET. It will contain just four functions which it will be doing different CRUD tasks
- UpdateModules()
- UpdateStudents()
- Read()
- InsertModules()
- InsertStudents()
- DeleteModules()
- DeleteStudents()

Database tables and ERD diagram:



ERD diagram

STUDENT DATABASE



Classes diagram:

