Exam Generator System

Subject: **CPE106**

Section: **B2**

Group: **2**

List of Members:

Buquis, Abraham C.

Elefante, Zedrik Xavier V.

Magayones, Lychee Iverson B.

Pablo, Ozel Renfre S.

Samonte, Kevin Rayne B.

Uysin, Monalisa S.

Table of Contents

A Overview 1

B List of Features 2

B.1 Login 2

B.2 Multiple Choice Mode 2

B.3 Identification Mode 2

B.4 Problem Solving Mode 2

B.5 Calculator 2

B.6 Significant Value Tolerance 2

B.7 File Upload 2

B.8 Question Randomizer 2

B.9 Quiz Timer 2

B.10 Flashcard Mode 2

B.11 Quiz Percentage 2

B.12 Post-test Answer Review 2

C Limitations 3

C.1 Login 3

C.2 Multiple Choice Mode 3

C.3 Identification Mode 3

C.4 Problem Solving Mode 3

C.5 Calculator 3

C.6 Significant Value Tolerance 3

C.7 File Upload 3

C.8 Question Randomizer 3

C.9 Quiz Timer 3

C.10 Flashcard Mode 3

C.11 Quiz Percentage 3

C.12 Post-test Answer Review 4

D System Requirements 5

D.1 Hardware Requirements 5

D.1.1 Processor 5

D.1.2 Memory 5

D.1.3 Storage 5

D.2 Software Requirements 5

D.2.1 Operating System 5

D.2.2 Software Requirements 5

E Database Diagram 6

E.1 Exam Generator System Database Diagram 6

F Class Diagram 7
F.1 Exam Generator System Class Diagram 7
G User Manual 8
G.1 Installing .Net 6.0 8
G.2 Adding Text Files 14
G.3 Running the Program File in Visual Studio ..... Error! Bookmark not defined.
H References 15
H.1 Reference # 1 15
H.2 Reference # 2 15
H.3 Reference # 3 15
H.4 Reference # 4 15

List of Figures

Figure E.1.a: Exam Generator System Database Diagram 6
Figure F.1.a: Exam Generator System Class Diagram 7
Figure G.1.a: Downloading .Net 6.0 8
Figure G.2.a: Opening the program in Visual Studio 9
Figure G.3.a: Adding Text Files 10
Figure G.4.a: Logging in and Registering 11
Figure G.5.a: Adding Text Files 12
Figure G.6.a: Viewing Scores 13
Figure G.7.a: Flashcard Mode 14

A Overview

The Exam Generator System allows the user to upload pre-existing notes as text. It generates a test based on that. The user can choose the type of questions which will be generated. It can be identification, multiple choice, or multiple-choice type. They can also choose to generate the questions at random.

This web application can be used by students as a reviewer and by educators as an assessment of their students' knowledge and performance. It is useful in this time when education is mostly done online. Students can use this application to practice and prepare for their tests. It will also save time for educators in creating tests.

The Exam Generator System functions only as a way to produce a quiz through the use of the information given by the user. The program itself shall not have any data that the user may use to generate their quiz. The only modules that the program shall have, are ones stated in its features. Any other mode of quiz cannot be generated by the system. Numerical answers on exams would always require an answer to be around two decimal places. Users should round up their responses once it goes past this point. The exams would show percentile results once the user has submitted the exam or the timer has run out. The text to speech function would only respond fluently to the English language. Any other language typed may experience pronunciation issues if played by the text to speech feature.

B List of Features

B.1 Login

This feature allows the user to log into their accounts using their username and password. If the user does not have an existing account, they can create one using their email.

B.2 Multiple Choice Mode

This feature produces the reviewer/quiz from the data input by the user and does the reviewer/quiz in a multiple-choice format.

B.3 Identification Mode

This feature produces the reviewer/quiz from the data input by the user and does the reviewer/quiz in an identification format.

B.4 Problem Solving Mode

This feature produces the reviewer/quiz from the data input by the user and does the reviewer/quiz with problem-solving tools.

B.5 Calculator

This feature is an extension of the app that has the features of a normal calculator.

B.6 Significant Value Tolerance

This feature allows the tolerance of answers in the user's input.

B.7 File Upload

This feature lets the user upload text files to be used in the app.

B.8 Question Randomizer

This feature will use the data given by the user and will generate different questions based on the aforementioned modes. The system is designed to randomize the sequence of the terms and definitions making the exam fell more natural.

B.9 Quiz Timer

This feature shows the user how much time they have left when taking a quiz.

B.10 Flashcard Mode

This feature shows a question and then reveals the answer by flipping the flashcard.

B.11 Quiz Percentage

The app will compute the percentage of correct answers in a test and display it to the user. Unanswered questions will be considered incorrect,

B.12 Post-test Answer Review

This feature displays the test with correct and incorrect labels.

C Limitations

C.1 Login

Upon logging in, the application will only accept Gmail accounts. Users will not be able to log in with accounts from any other domain. When creating an account, their passwords should have a minimum of eight letters, a number, and a symbol.

C.2 Multiple Choice Mode

Information given by the user will be the only source the program can use. All the data from the user input will be used as choices for this mode.

C.3 Identification Mode

All the terms and definitions will be provided by the user. The program will not check for the correctness nor accuracy of the information given. It will also not check for mismatched definitions.

C.4 Problem Solving Mode

All the information required for the test, questions and answers shall be provided by the users.

C.5 Calculator

The calculator can only do basic arithmetic operations. No algebraic nor trigonometric solutions can be solved through this program.

C.6 Significant Value Tolerance

The significant value tolerance of the program is 5% and is limited to 2 decimal places.

C.7 File Upload

The user can upload text files in the app.

C.8 Question Randomizer

The program itself will not browse for any other information other than the user's inputs to randomize the test.

C.9 Quiz Timer

The user will be the one to activate the timer. The test will automatically stop and submit once the timer ends. The span of time that can be set by the user is 1 hour.

C.10 Flashcard Mode

This mode will reveal only one question at a time assigned to answer or a list of answers.

C.11 Quiz Percentage

The app will only display the score once the user has submitted all the answers. The app will not compute the overall percentage for a set of tests.

C.12 Post-test Answer Review

The program will not show what the correct answers are for the questions that were answered incorrectly.

D System Requirements

D.1 Hardware Requirements

D.1.1 Processor

Base Frequency	: 2.7 GHz
Processor Thread Count	: 4

D.1.2 Memory

Memory Capacity	: 16 GB

D.1.3 Storage

Disk Size	: 237 GB

D.2 Software Requirements

D.2.1 Operating System

Operating System Name	: Windows 10
Architecture Type	: 64-bit
Edition	: Pro

D.2.2 Software Requirements

Software Application # 1	: Visual Studio Community 2022 v17.1.0
Software Application # 2	: SQL Server 2019 Developer
Software Application # 3	: SQL Server Management Studio v18.11.1

E Database Diagram

E.1 Exam Generator System Database Diagram

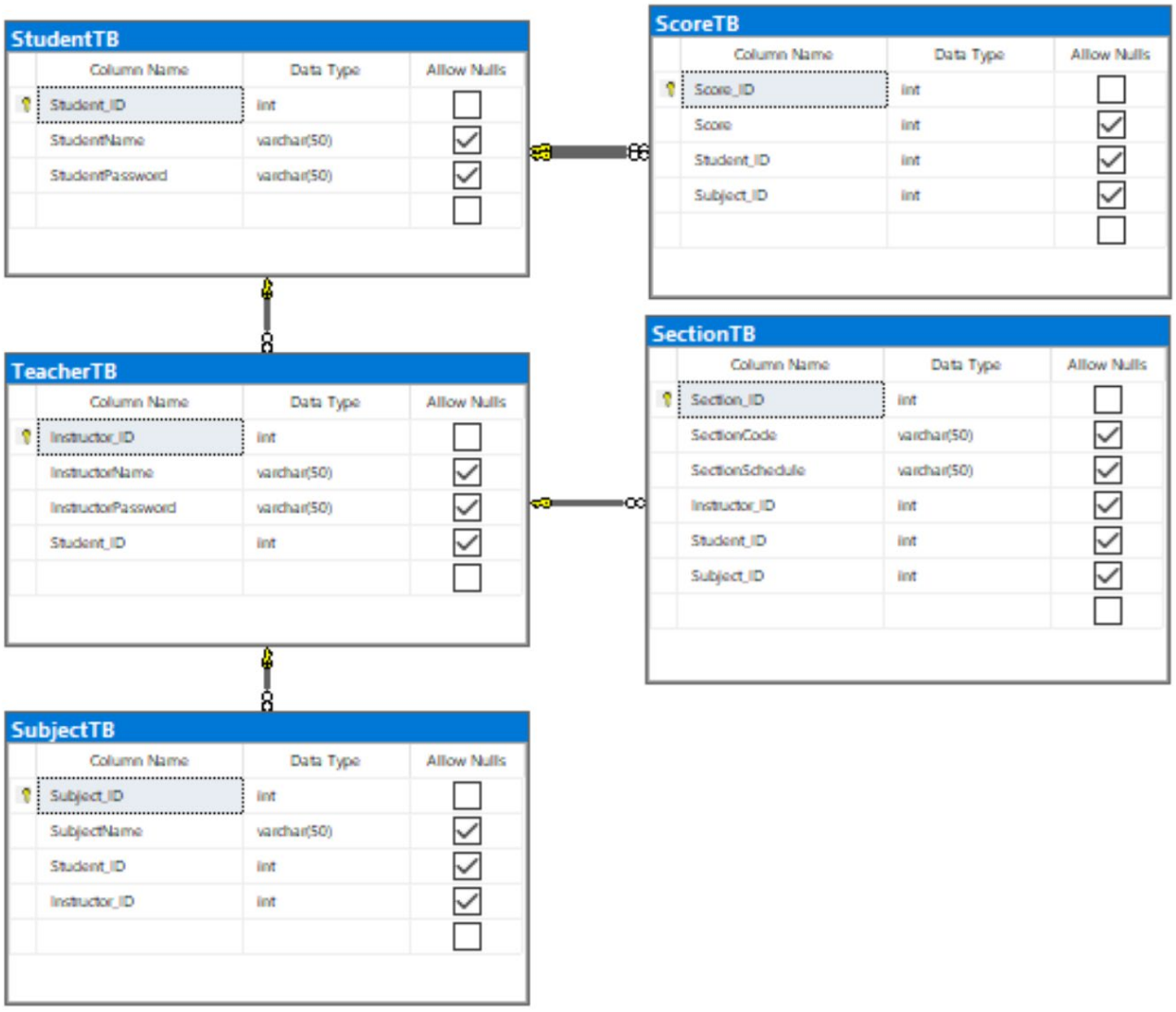

Figure E.1.a: Exam Generator System Database Diagram

F Class Diagram

F.1 Exam Generator System Class Diagram

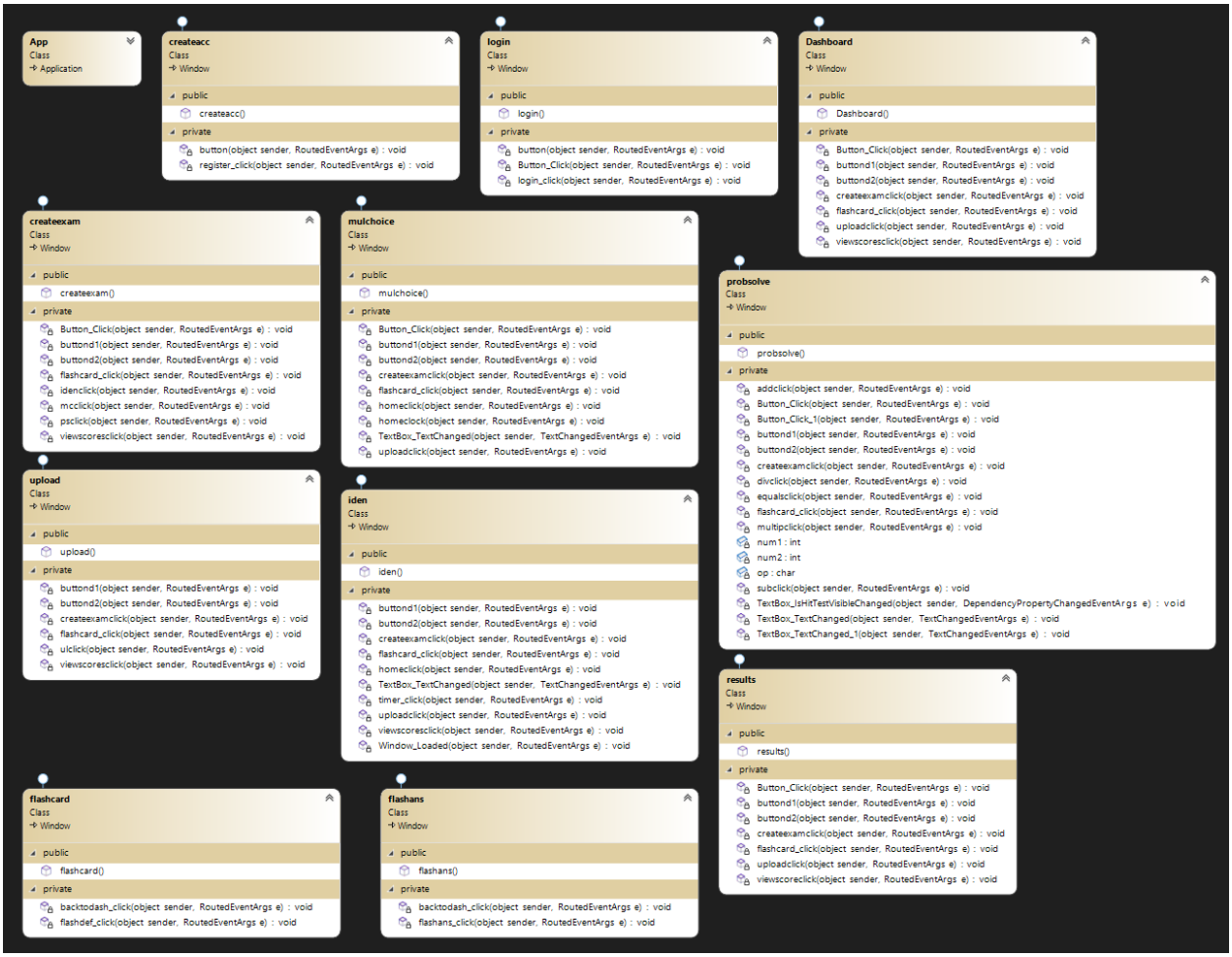

Figure F.1.a: Exam Generator System Class Diagram

G User Manual

G.1 Installing .Net 6.0

1. As the app would need this version of .NET, go to this website.
2. Click the Download button with the same bit Windows of your PC.

Figure G.1.a: Downloading .Net 6.0

G.2 Running the Program File in Visual Studio

1. Launch Visual Studio
2. Select "Open a Local Folder" and choose the folder containing the program
3. Double click "Exam Generate.sln" to select the program and proceed to debugging

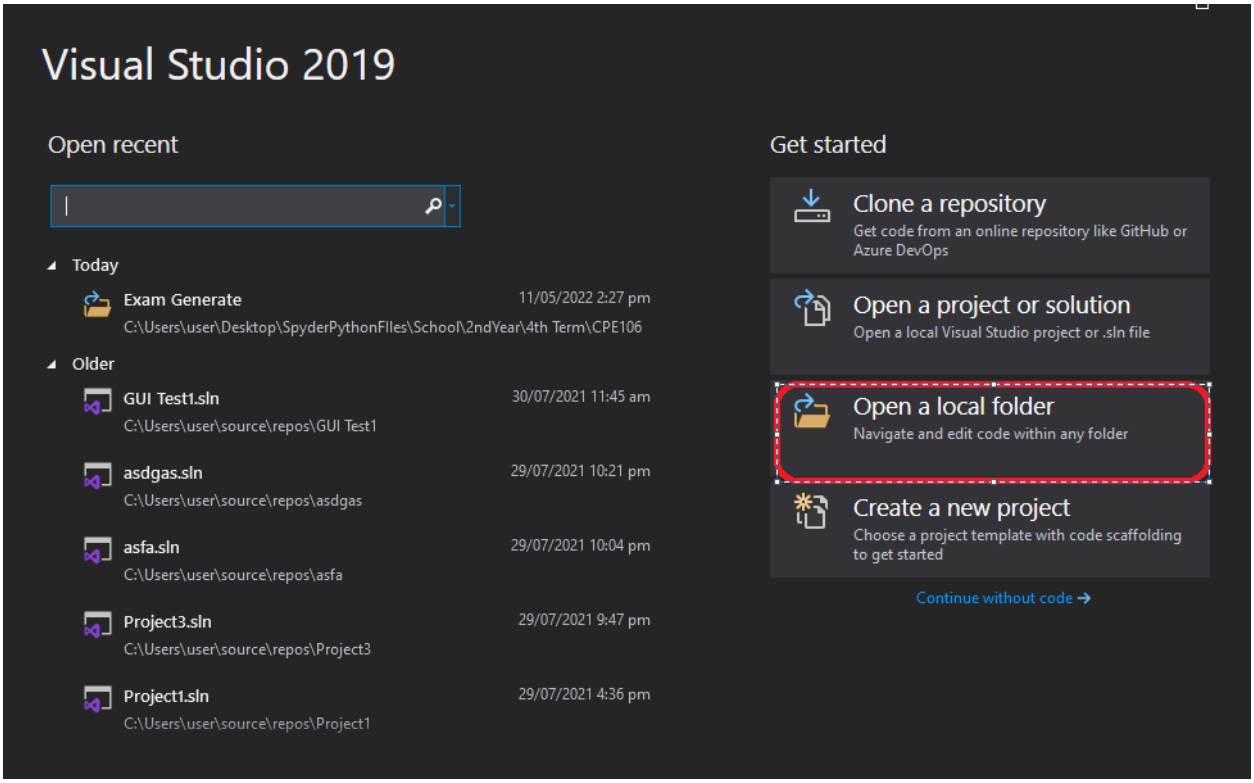

Figure G.2.a: Opening the program in Visual Studio

G.3 Adding Text Files

1. Click on the "Upload Notes" Tab
2. Click on the "Upload Files" button and insert a TEXT file of choice.

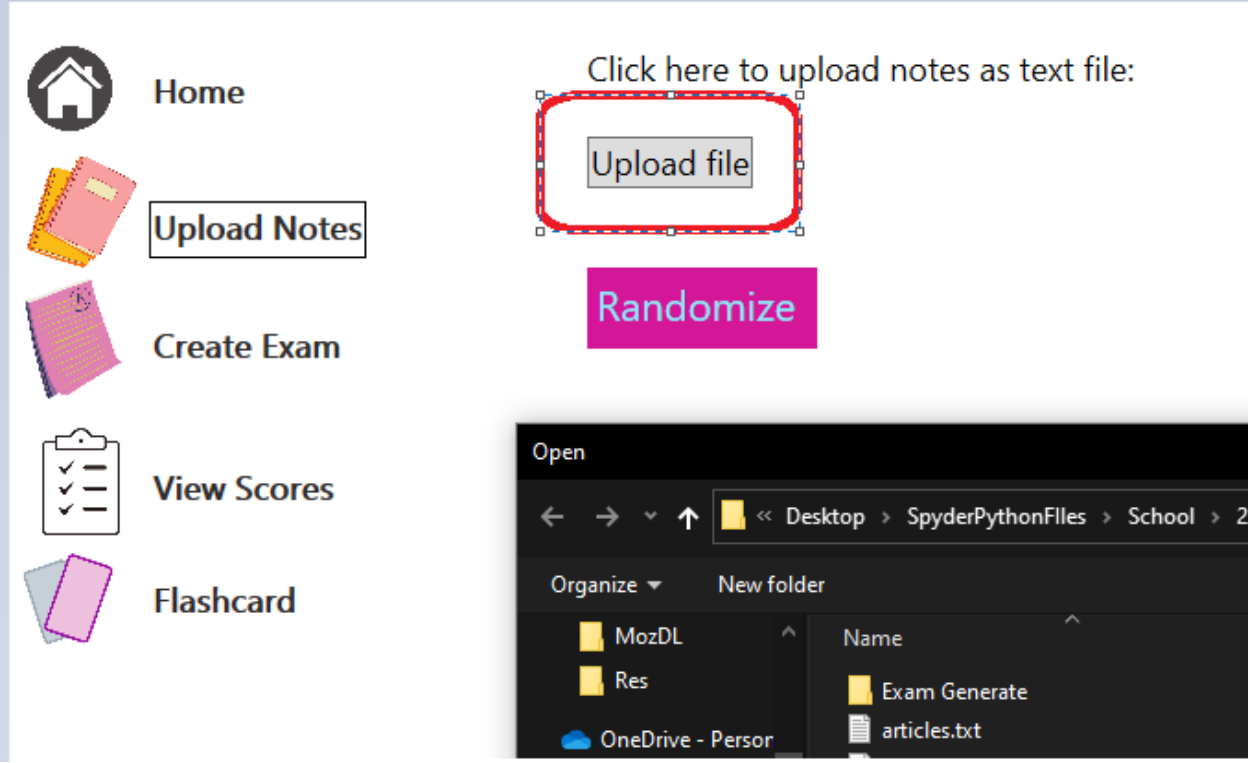

Figure G.3.a: Adding Text Files

G.4 Logging In / Registering

1. Click on the Login or Register
2. Fill up the new pop-up icon with the necessary credentials
3. Click the "Login" or "Register" button afterwards

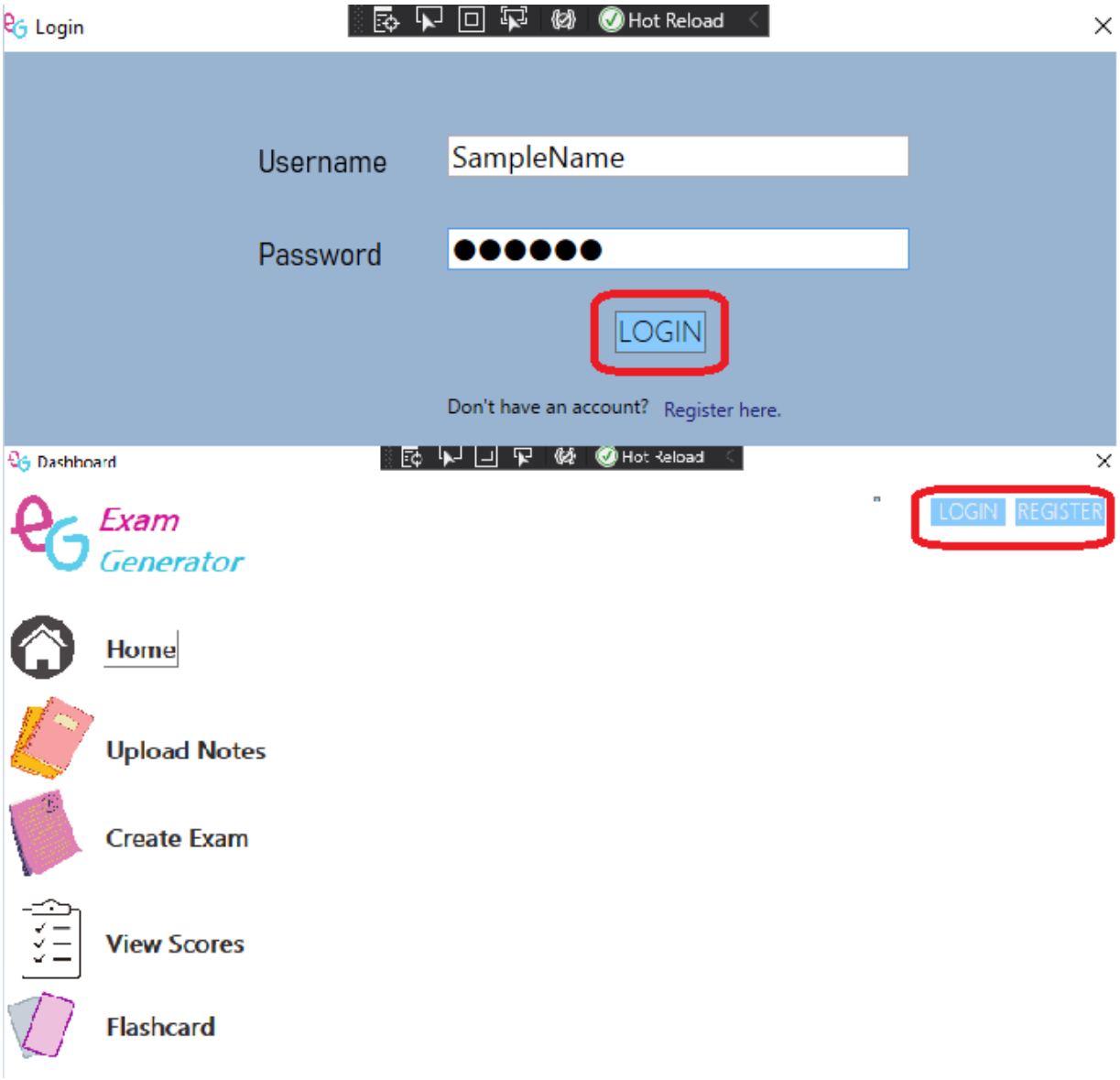

Figure G.4.a: Logging in and Registering

G.5 Creating Exam

1. Click on the "Create Exam" tab
2. Choose which exam type you would like to use
3. The program will then use the given information to create an exam

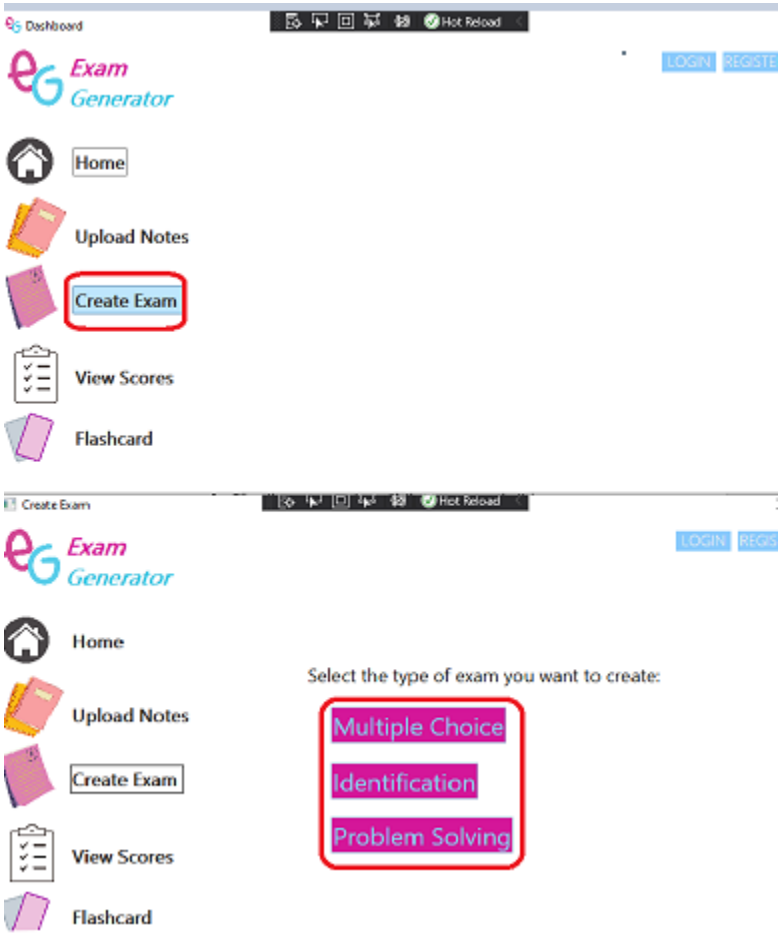

Figure G.5.a: Adding Text Files

G.6 Checking Scores

1. Click on the "View Scores" Tab
2. See your Score on this tab after taking a test

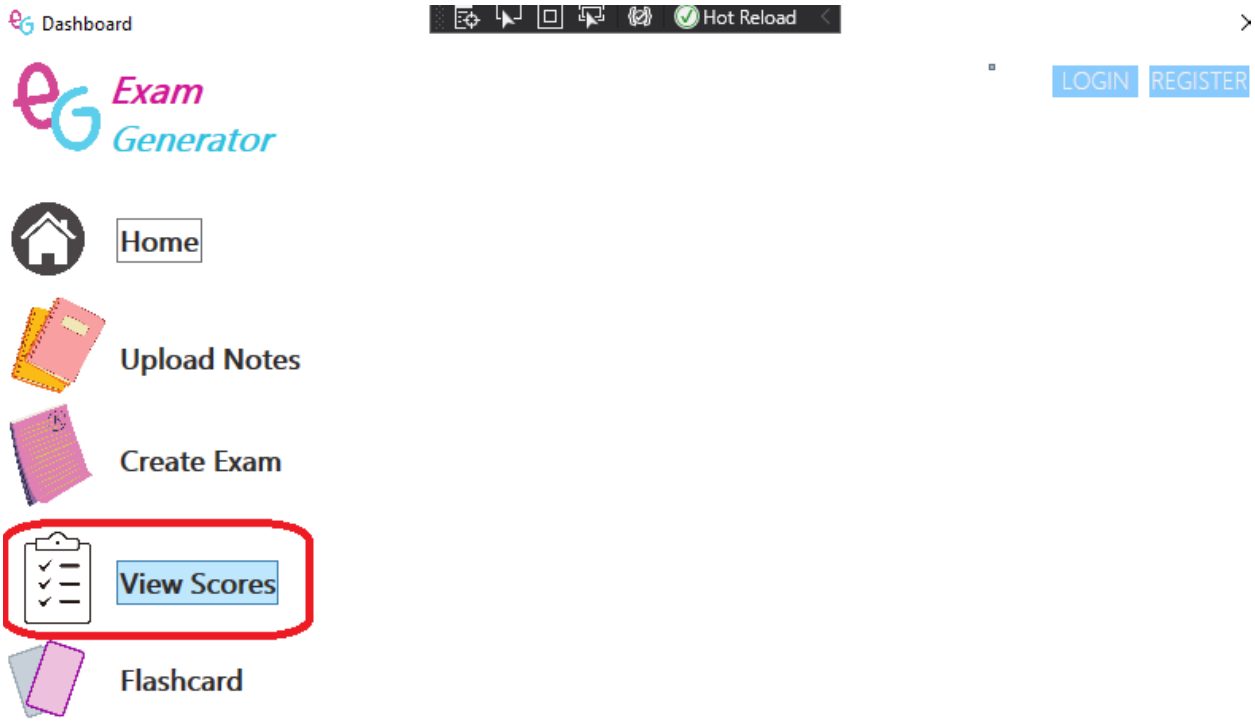

Figure G.6.a: Viewing Scores

G.7 Flashcard Mode

1. Clicking on the "Flashcard" tab leads you to a different kind of test
2. This new test shows definitions first then clicking on the flashcard gives you the answer

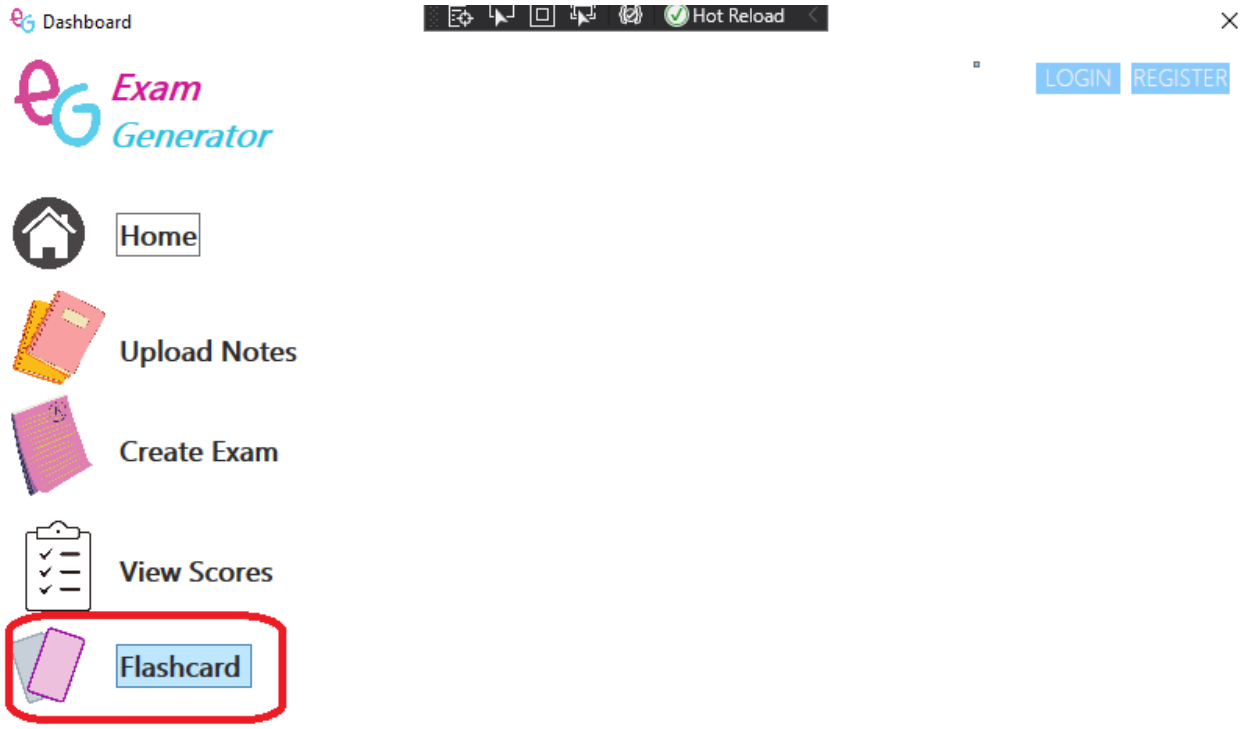

Figure G.7.a: Flashcard Mode

H References

H.1 Reference # 1

Reference Title:
SQL Servers for C# Developers

Reference Author:
Sander Rossel

Reference Page Source:
Pages 61-66

H.2 Reference # 2

Reference Title:
How to Create Login Screen in Wpf with Sql DataBase

Reference Author:
CodAffection

Reference Page Source:
https://www.youtube.com/watch?v=72366X1-heg

H.3 Reference # 3

Reference Title:
WPF Login and Register Page using SQL Server

Reference Author:
denden

Reference Page Source:
https://www.youtube.com/watch?v=7mD_QdO1WZg

H.4 Reference # 4

Reference Title:
Buttons and Click Events in WPF C#- WPF C# Tutorial Part 2

Reference Author:
Coding Under Pressure

Reference Page Source:
https://www.youtube.com/watch?v=70-x_Zkf2gE

MAPÚA
UNIVERSITY