

**WHEN YOU FINISH THIS TEST – PLACE YOUR ENTIRE SOLUTION INTO A ZIPPED FOLDER
YOU MUST UPLOAD THIS ZIPPED FOLDER TO MyUWS/MOODLE BEFORE THE END OF THE TEST**

COMP09020 Internet Scripting

Coursework One

Before you begin, download the zipped file `CourseworkOne.zip` from [MyUWS/Moodle](https://myuws.moodle.com/).

Unzip this file into your local working directory.

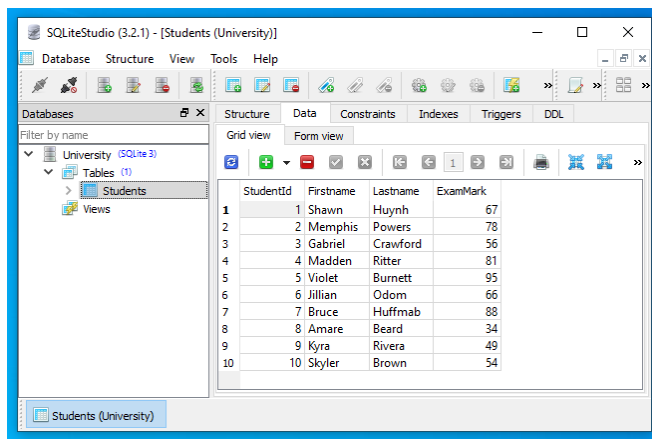
You should have:

- A folder name `CourseworkOne`

And inside this folder, you should have:

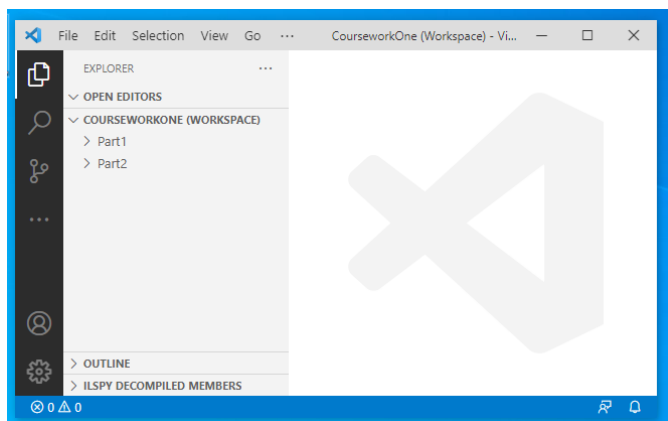
- A code workspace file named `CourseworkOne.code-workspace`
- A copy of this assessment named `CourseworkOne.pdf`
- An SQLite Database named `University.db`
- An SQL file named `University.sql` – *this file is for reference and contains the SQL commands used to generate the University database*
- Two sub-folders named `Part1` and `Part2`

Open `University.db` in **SQLite Studio**.



You should see `University.db` contains a single table named `Students`.

Open the given workspace in Visual Studio Code – *by double clicking the file `CourseworkOne.code-workspace`*.



In the Explorer, you should see two project folders `Part1` and `Part2`.

**TO BE ELIGIBLE FOR FULL MARKS YOUR APPLICATIONS MUST WORK IF THE CONTENTS OF THE
UNIVERSITY DATABASE – AND IN PARTICULAR THE STUDENTS TABLE - CHANGES**

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PART 1. WORKING WITH CONSOLE APPLICATIONS (20 MARKS)

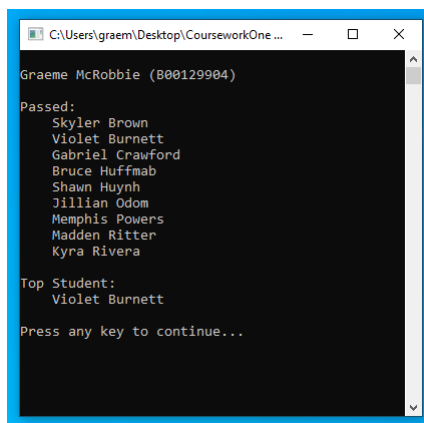
Inside the `Part1` folder, create a console application.

When *run*:

- a) Output/display *your name* and *matriculation number*. (4 marks)
- b) Output/display the *fullnames* (firstnames and lastnames) of all the students in the University database (4 marks)
 - i. Filter those *fullnames* so only the students who passed the exam are displayed – *assume a student passes an exam if their mark is greater than or equal to 40* (4 marks)
 - ii. Order those *fullnames* so they are listed alphabetically with respect to the lastnames (4 marks)
- c) Output/display the *fullname* of the student with the highest mark (4 marks)

(20 marks possible)

Below is an image of how your console application should look when *run*:



The screenshot shows a console window titled "C:\Users\graem\Desktop\CourseworkOne ...". The output of the application is as follows:

```
Graeme McRobbie (B00129904)

Passed:
Skyler Brown
Violet Burnett
Gabriel Crawford
Bruce Huffmab
Shawn Huynh
Jillian Odom
Memphis Powers
Madden Ritter
Kyra Rivera

Top Student:
Violet Burnett

Press any key to continue...
```

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PART 2. WORKING WITH WEB APPLICATIONS (20 MARKS)

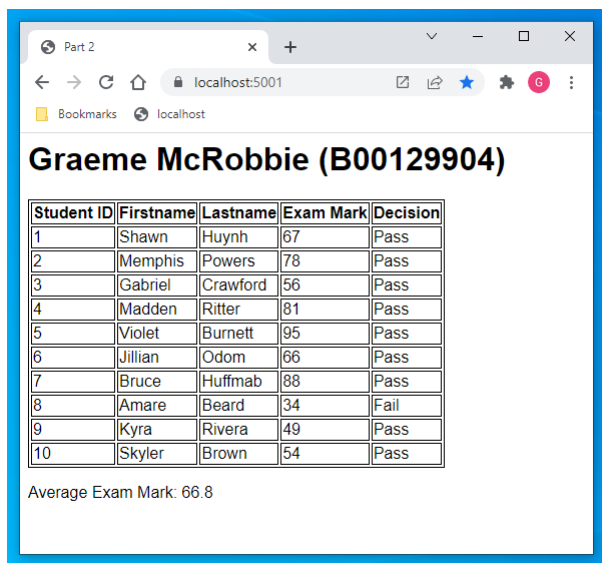
Inside the `Part2` folder, create a web application – *using either Razor, MVC or Blazor*.

Create a home/default page that when viewed

- a) Displays *your name* and *matriculation number* as a level one header (4 marks)
- b) Displays the entire *contents* of the Students table within the University database (4 marks)
 - i. Neatly format those *contents* inside an HTML table (4 marks)
 - ii. Add a *Decision* column to your HTML table – *students with a mark greater than or equal to 40 should be given a “Pass” decision – students with a mark less than 40 should be given a “Fail” decision* (4 marks)
- c) Display the average exam mark within a paragraph of text (4 marks)

(20 marks possible)

Below is an image of how your home/default page should look when the web application is *run*:



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