**Student Marking Application Documentation**

The “Student Marking Application” is a user form-based application which utilizes SQL queries with Microsoft Access to query a database comprised of students, courses, and the associated grades on each assignment in said courses. It uses this data to output various details about the computed averages of the courses, whether overall or by assignment. These averages are then output to both an excel spreadsheet as raw data and a histogram on a Microsoft Word document with additional computations involving max, min , average, mode, median, and standard deviation.

**How to Launch:**

To begin using the Student Marking Application, first head over to the "Student Marking Application" tab and click on the "Launch" icon under "Utilities". This will open the userform application and allow you to start using it.

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**Main Menu:**

The application consists of a primary main menu consisting of three choices: "Input Data", "List Courses", and "Generate Report". To access one of these, select the corresponding option button and click the "Continue" button. This will take you to an additional userform submenu for the choice.

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**Input Data Submenu:**

The "Input Data" form allows you to browse and select a database to load. Click the "Browse" button or manually type into the input box in order to load the path of the Registrar.mdb-like database.

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**List Courses Submenu:**

The "List Courses" form allows you select any of the following courses by hitting its corresponding button (or all of them), generating a spreadsheet of enrolled students and outputting the course average in a message box.

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**Generate Report Submenu:**

The "Generate Report" form allows you to select any of the listed assignment option buttons and generate both a histogram based on the averages of each course for the assignment, AND, a report with additional quantitative data such as max, min, mean, etc.

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**List Courses Results:**

For a demonstration of the “List Courses” form, selecting the CP212 button on the submenu will populate the spreadsheet with a list of students and output a message box. The list of students consists of the first name, last name, and student number. The message box outputs the weighted average (all assignments) between every student in the class.

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**Generate Report Results:**

For a demonstration of the “Generate Report” form, the assignment 3 (A3) option button was selected for generation of results. As you can see, a new “Histogram” worksheet was created with a table of averages displaying the computed average across all the students on an assignment in each course. A bar graph to represent this data more easily was created on the right as well.

A screen shot of a computer

Description automatically generated

Along with this spreadsheet, a Word document report called “Report.docx” was created. This includes a little extract about the data, the same histogram from the spreadsheet, and several more computations as mentioned previously (max, min, average, mode, median, and standard deviation). An image of the generated report is attached below on the next page.

A screenshot of a graph

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