**Phase 3 Python Project**

Based on scenarios defined in Phase-I, design and implement main user interface in Python for your application. This may contain different widgets on main window. The widgets may include buttons, radio buttons, check buttons, menu options or any other widgets (e.g. Text fields, labels, text area, etc.) Main UI

**MAIN UI:** The main user interface consists of 12 widget buttons. 1 is registration for student. 2 is course details input. 3 is for viewing course detail in formatted output. 4 is entering the fee details. 5 is inputting receipt information. 6 is viewing the receipt details. 7 is viewing the student details. 8 is for entering administration details. 9 is viewing the administration details. 10 is for registering the main identifications for the students. 11 is for viewing the registration information. “FORMAT DATABASE” widget button is for erasing all data within the database system without dropping the tables, just deleting information within the tables.

Text

Description automatically generated

Take screen shot and crop and paste the display in your lab report Based on different scenarios, your UI will receive data to be saved in database and based on pressing of buttons or choosing other widgets, your application execute to display information based on your choice, your application pops a window either to display information or to read data from user application. Write Python application to display child windows when any main widget is used for execution. Demonstrate all the Windows that will be opened under various scenarios. Explain how each window is associated to the scenarios defined. Write down each scenario and explain how the UI combination of widgets help in implementation of the scenario Take screenshot, crop and paste each windows UI

**Scenario 1: Administration/Login:** In this scenario, the administrator will click the “PASSWORD HINT” widget and another window pops up saying the password hint. This is based on the administration/login scenerio from phase 2.

Graphical user interface

Description automatically generated

**Scenario 1 case 2 Administration/login:** In this scenario, the administrator will click the “RECOVER PASSWORD” widget and another window pops up saying to enter email. The administrator will enter their email and password will be emailed to them with a window pop up.

Graphical user interface

Description automatically generated

**Scenario 2: Student Registration:** In this scenario, we enter the student id, name, surname, email, gender, course, subject, total fees calculated automatically, and course id. Another window pops up to confirm the registration of the student. If the yes button is pressed, then the information is registered in the database system in the student and course tables.

Graphical user interface

Description automatically generated

**Scenario 3 Course Registration:** In this scenario, we will input the course information based on the course id from the registration of the student from scenario 2. The course id must match from the student registration from scenario 2 as a foreign key. There is offer id, semester, section of the course, and course id. The window popup confirms that the course information is registered in the database.

Graphical user interface

Description automatically generated

**Scenario 3 case 2 Course Offerings:** In this scenario, we will view the course information from scenario 3. It will display the course id, section number, and semester that the course is offered.

Graphical user interface, text

Description automatically generated

**Scenario 4 Fees Calculation:** In this situation, we input the student id of 123 from the registered student. Then we add $400 in the account as paid fees. The remaining fee for the student shows $2300 because the student paid already $400 from the total fees.

Graphical user interface

Description automatically generated

**Scenario 5 Input of receipt, administration, and registration table:** All the input information is going into the tables and in the database. The fees\_id must match the student id. For the administration input, the correct student id from the student table must be used. For the registration window input, course id and student id must be the same from previous data. When data is entered in the child windows, a window popups for confirmation of entry of data to the database.

Graphical user interface

Description automatically generated

Graphical user interface

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Graphical user interface

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**Scenario 6 View of receipt, administration, and registration table:** All the input information is from the database is viewable in the options of: 6. View Receipt, 9. Administration Details, and 11. Registration View. These view tables are extracting information from the database in a formatted output in tree view functions.

Graphical user interface, application

Description automatically generated

Graphical user interface, text, application

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Text

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Use Button, Radiobutton, Checkbutton, Menu options or other widgets for this phase of the project: (executions based on pressing button/or other checkbox choice or radio button choice driven event based execution)

We have utilized the radio buttons in student registration windows user interface. We have utilized buttons within the main interface of the school management system. The radio buttons were utilized for choosing male or female in the student registration scenario. We used the check buttons for selecting the subjects for each students. We also have utilized a select drop down window for the courses within the student registration scenario. We have used the windows popups for almost each case for inputting data. We used formatted output tree views for viewing the data from the database of MySQL. Whenever we input data to the user interfaces, a window popups to confirm the entry of information to the database. Also, some scenarios will ask to delete data or not. When “FORMAT DATABASE” widget is pressed, then the message box will ask to delete data from all of the tables within the database system or not. Also when deleting student data, it will ask from a message box to delete the data from the student table or not for a yes or no button.

Summarize your report explaining if any scenario is changed or updated due to challenges in implementation of Phase-III of the project **5 Marks**

The scenarios from phase 2 were slightly altered to adjust the changes for the implementation for phase 3. The current scenarios are: administration/login, student registration, course registration, fees calculation, input of registration, receipt, and administration data, and viewing the registration, receipt and administration data. Phase 2 scenarios were: administration/login, student registration, course registration, student details, fees calculation, and receipts/viewing receipts. We had to remove the view table and add the course\_offered table and registration table. The reason why is that the view table is easily viewable from MySQL. Altering the tables impacted the scenarios because it changed the data types, input data, and overall design of our project. The functions within the source code were harder to execute because of the changes in the tables so we have to reduce the amount of functions to make the whole program execute successfully without any errors.