

## **GUI Programming 2019-2020 – Year 2**

### **Labwork 9 – JMenu's and JDialogs:**

**(Worth 5% - or 50 points out of 500 points for labwork this semester)**

#### **IMPORTANT NOTES:**

- **NO COPYING PERMITTED AND ZERO MARKS WILL APPLY TO COPIED WORK. FURTHER ACTION MAY BE TAKEN AGAINST STUDENTS THAT HAVE BEEN FOUND TO COPY WORK.**
- **ASSESSMENT WILL INVOLVE ONE-TO-ONE QUESTIONS ABOUT YOUR SUBMITTED WORK. USE COMMENTS IN YOUR CODE TO ENSURE YOU DON'T FORGET WHY YOU WROTE CODE YOU MAY LATER BE ASKED ABOUT.**
- **ALL WORK MUST BE SUBMITTED TO MOODLE BY DATES SPECIFIED (2 LABS SUBMISSIONS OF FIVE LABS THROUGHOUT THE SEMESTER).**
- **MANY OF THE TASKS ASSIGNED BELOW CAN BE COMPLEX AND\OR THE DESCRIPTIONS MAY REQUIRE FURTHER CLARIFICATIONS. PLEASE USE THE AVAILABLE LAB TIMES TO ASK FOR CLARIFICATIONS AND ADVICE\HINTS ON THE TASKS BELOW.**

### Part 1 – Input Dialog (10 points)

Create a class called **Lab9Part1**. Create a JFrame that contains a JButton with the String set as “Launch Input Dialog”. Launch an input dialog once the button is pushed so that the user is requested for their surname (input the details into a blank field). When the user enters their surname set the title of the JFrame to the surname entered.

- Create the button and add the listeners (2 points)
- Launch the input dialog (with blank input field) (3 points)
- Retrieve the name entered from the dialog (3 points)
- Set the title of the JFrame to the dialog input (2 points)

### Part 2 – Build a basic menu (10 points)

Create a class called **Lab9Part2**. Create a JFrame and add two JMenu’s to the JFrame’s menubar. Add a menu called ‘Functions’ and a menu called ‘Languages’. Add two menu items to the ‘Functions’ menu called ‘Rename’ and ‘Delete’. Add two menu items to the ‘Languages’ menu with two languages of your choosing: add a flag to represent the country for the language (e.g. Mandarin could have a small Chinese flag icon).

- Create the menubar (and set) (1 point)
- Create menus and add to menubar (2x 2 points) (4 points)
- Create menu items and add to correct menus (4x1 points) (4 points)
- Add icon to language menu items (1 point)

### Part 3 – Menus with listeners and short cuts (10 points)

Create a JFrame class called **Lab9Part3**. Create a JFrame with a JMenu called ‘News’. Add at least three menu items to the menu with the following headings ‘Sport News’, ‘Media News’, ‘Weather’. When the user clicks the corresponding menu option make a news related image appear in the GUI and also include a scrollable text area to describe the news item (e.g. Media News could have a flag with Ian Wright holding an Arsenal flag in the jungle). Add a mnemonic and appropriate accelerator to each of the menu items so that the menu options can be short-cut.

- Create the menubar (and set) (1 point)
- Create and add the menu (2 points)
- Create and add menuitems (3 x 1 point) (3 points)
- Listeners for ALL menu items (shortcuts tested) (2 points)
- Short-cut working (1 point)
- Scrollable textarea (1 point)

#### Part 4 – A small adventure game using only Dialogs (20 points)

Create a class called **Lab9Part4**. Create a JFrame that mimics an adventure game using only dialogs (you will have to come up with a possible start to the game to launch it!). The user will be presented with three doorways (represented as dialog options) to enter at the beginning of the game (use your imagination here, e.g., different colours of shapes of doors etc.). Once a user chooses a door present at least **ONE** other decision for them to make using dialogs before the games ends (e.g. You are presented with a cup of liquid to drink by a leprechaun, do you drink it? Yes No etc.; does drinking the cup kill you or make you stronger? etc.). The options **MUST** be controlled by **Dialogs**. The end of game status should be shown using a **dialog**. Use a least **ONE** custom image added to a dialog in the dialog sequence.

- Present the initial game option using a dialog (three doors) (2 points)
- Create PATH 1: Another decision\option leading to an outcome (4 points)
- Create PATH 2: Another decision\option leading to an outcome (4 points)
- Create PATH 3: Another decision\option leading to an outcome (4 points)
- The flow of the game is well controlled (3 points)
- Inclusion of a customized image in the dialogs (2 points)
- Overall game scenario complete\good quality (1 point)