2810ICT/7810ICT Software Technologies

Workshop 5 – User Interface Implementation

Objectives

In this workshop you will:

- Develop a simple UI in Python

Overview

In the lecture in week 5 we looked at user interface implementation. For this weeks workshop, we will develop a simple interface for a calculator

Task 1

– Setup wxPython

- Use Anaconda/Miniconda to install the wxPython library

    > conda create -n **workshop5**

    > conda activate **workshop5**

    > conda install python=3.9

    > conda install wxpython -c conda-forge

- Open up your pycharm, create a new python project, and make sure that your new project is linked with the python environment **workshop5**
- Create a .py file

– Install wxFormBuilder
- Download and install wxFormBuilder based on your OS
  https://github.com/wxFormBuilder/wxFormBuilder/releases
- If you are using macOS, you need to install from source, by following the instructions at the bottom of the page via the link below:
  https://github.com/wxFormBuilder/wxFormBuilder

Task 2 – Calculator

- Develop a simple GUI for a calculator and the UI should be like below
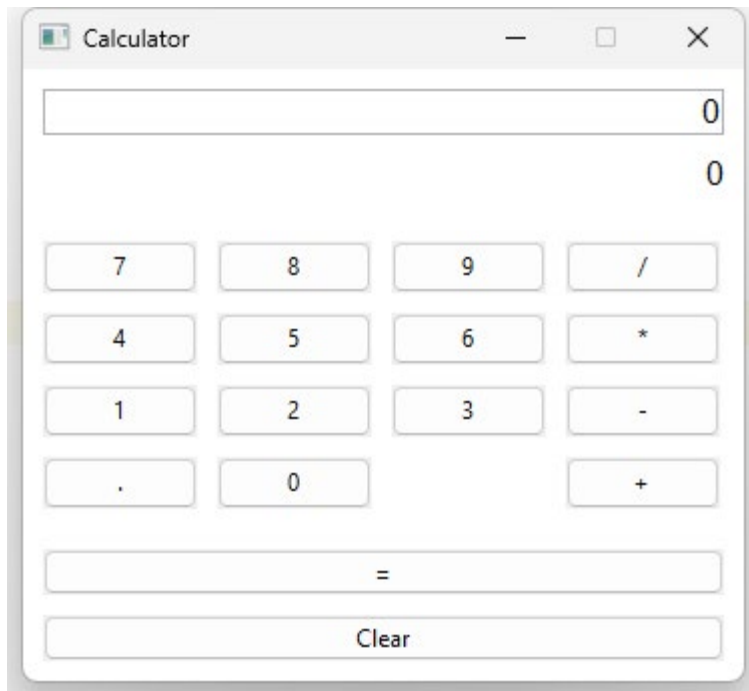
- The calculator should have:
  - Clear (resets the calculator)
  - 4 arithmetic buttons (+ - / *) to choose the operation.
- The calculator should have a display to show the result.

The calculator will be simpler than a normal calculator. The result should be output somewhere on the GUI.

Tips:
APIs will be used in this application.
- event.GetEventObject() # Returns the object (usually a window) associated with the event, if any.
- button.GetLabel() # Returns the string label for the button.
- button.SetLabel(label_string) #Sets the string label for the button.
- staticText.GetLabel() # Returns the string label for the staticText.
- staticText.SetLabel(label_string) #Sets the string label for the staticText.
- eval(cmd_string) #evaluates the specified expression, cmd_string, if the expression is a legal Python statement, it will be executed and returns the result.