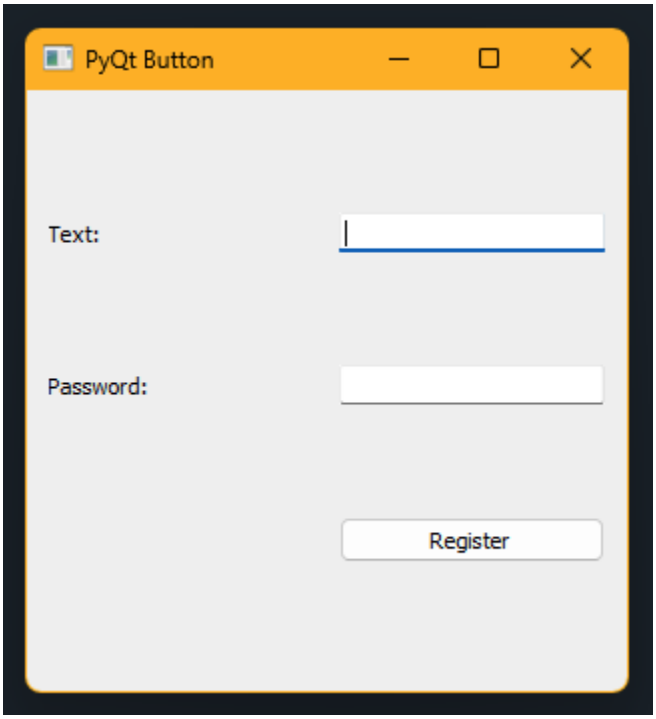
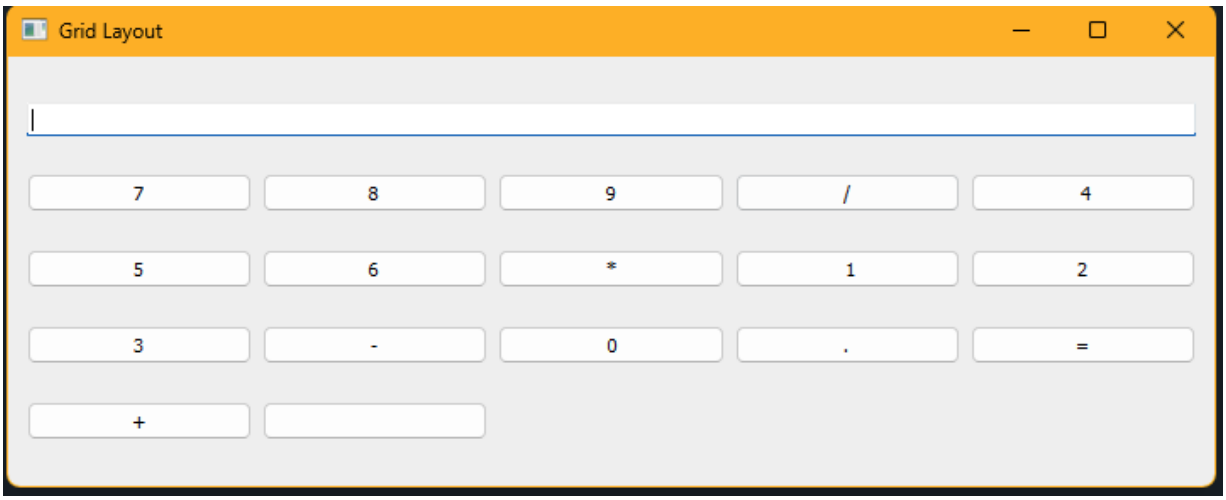
Laboratory Activity 6 - GUI Design: Layout and Styling

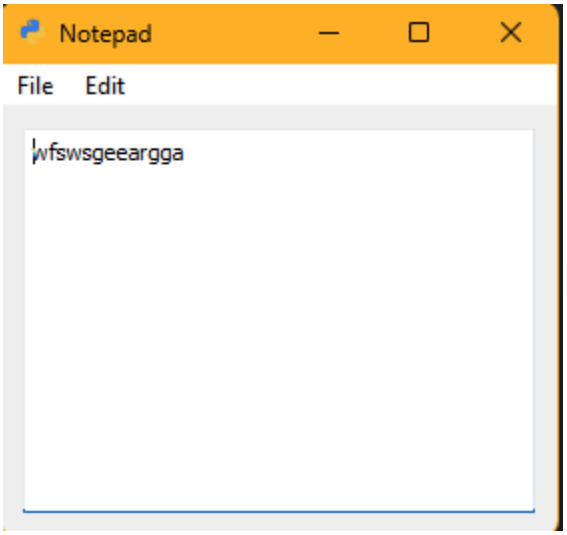
Carag, Carl Jervie B. Carag	28/10/2024
Course/Section : CPE21S4	Engr. Maria Rizette Sayo



gui_grid1.py = Output



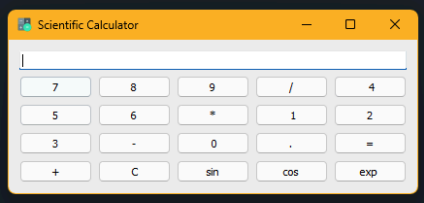
gui_grid2 = Output



gui_simplenotepad = Output

Supplementary Activity

```
Created on Mon Oct 28 08:23:20 2024

@author: TIPQC
"""

import sys
from PyQt5.QtWidgets import QWidget, QMainWindow, QApplication, QPushButton, QLineEdit,QGridLayout, QLabel,QHBoxLayout, QVBoxLayout
from PyQt5.QtGui import QIcon

class GridExample(QWidget):
    def __init__(self):
        super().__init__()
        self.initUI()
    def initUI(self):
        grid =QGridLayout()
        self.setLayout(grid)

        names  = [
            '7', '8', '9', '/', ' '
            '4', '5', '6', '*', ' '
            '1', '2', '3', '-', ' '
            '0', '.', '=', '+', ' '
            'C', 'sin', 'cos', 'exp ', ' ']
        self.textLine = QLineEdit(self)
        grid.addWidget(self.textLine, 0,1,1,5)

        #using a loop
        positions = [(i,j) for i in range(1,7) for j in range(1,6)]
        for position, name in zip(positions,names):
            if name == ' ':
                continue
            button=QPushButton(name)
            grid.addWidget(button, *position)

            self.setGeometry(300,300, 300, 150)
            self.setWindowTitle('Scientific Calculator')
            self.setWindowIcon(QIcon('Calculatorico.ico'))
            self.show()
```



Conclusion:

I have learned in this Activity about the different methods on how we could create the Grid Layout in python using the PyQt5.QtWidgets which allows us to import different widgets that will apply the functions to enable access into some operations. I have also used the “sys import” that gives access to the system specific parameters and functions in python. For the “**gui_grid1.py”** activity this gives me awareness about the different techniques on how to apply the label which uses “QLabel” in the PyQt5. QWIdgets. We may also use the “setEchoMode” in order to hide our password while typing it. The next activity is **“gui_grid2.py”** which shows a simple calculator that uses the different operations that allows me to include buttons by importing the “QPushButton” that displays the necessary buttons into the calculator. For the last “**gui_simplenotepad.py”,** I have been able to know how to apply menus in the program which then also could lead to the functions such as “File” and “Edit” on the menu by using the word “AddAction”. This activity also made me know how to save the file and open the file in the text type. In the Supplementary Activity it is similar to the calculator activity but this time with sine, cos, and exponential functions, I have also changed the icon logo into calculator icon.