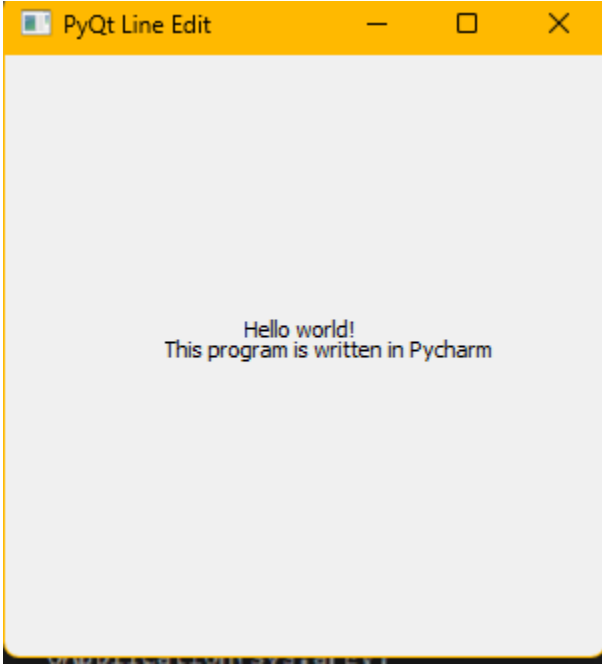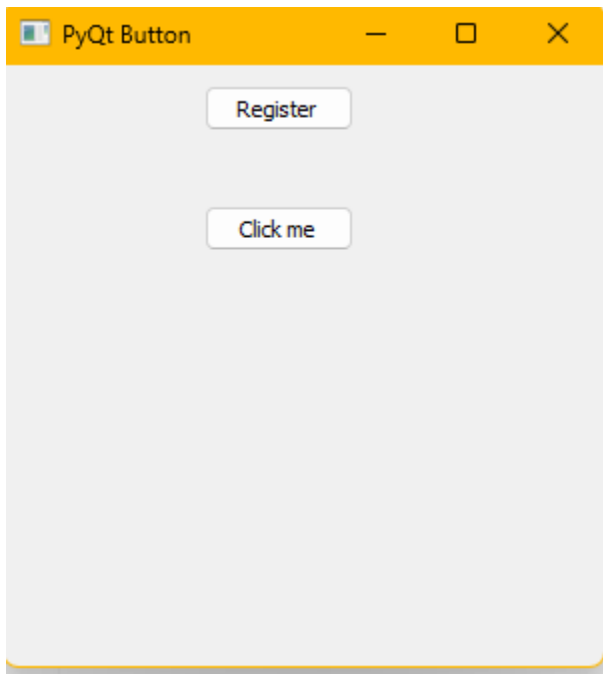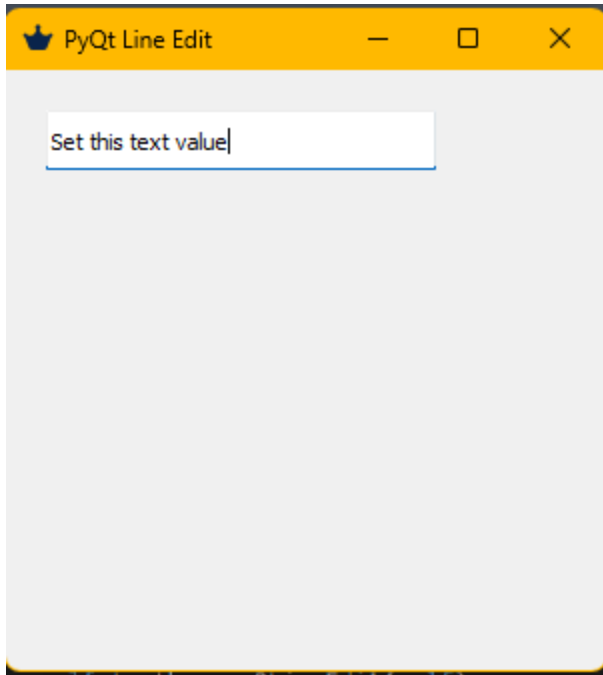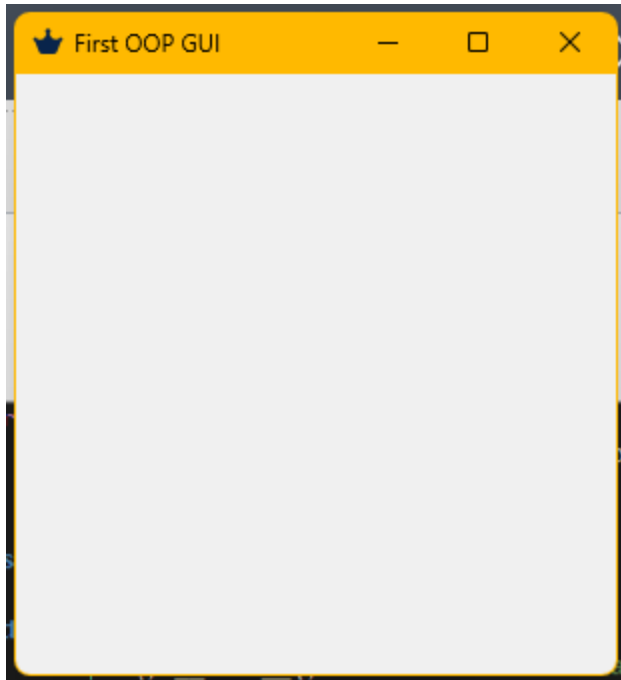| LABORATORY 4	
Introduction to GUI Development using Pycharm	
Bautistia, Jhon Hendricks T.	10/17/2024
CPE 009B / CPE21S1	Mrs. Maria Rizette Sayo

Procedure output

PyQt Line Edit

Hello world!
This program is written in Pycharm

PyQt Line Edit

Set this text value

PyQt Button

Register

Click me

Questions

1. What are the common GUI Applications that general end-users such as home users, students, and office employees use? (give at least 3 and describe each)

   First is the file explorer which is a very common GUI in the windows operating system. It helps users to find and manage their files on the computer. Second is Android which has many versions of its GUI for different generations of phones. It has many display tools and widgets for phone users to customize to their liking. Third is Netflix which has many personalization settings where shows are easily seen and presented in a clean manner for viewers to see.

2. Based from your answer in question 1, why do you think home users, students, and office employees use those GUI programs?

   This is due to their ease of use and aesthetics. GUI helps us develop and use applications that do not need command line prompts for users to use. It allows common people like students and homeowners to use these applications with ease. It makes it so that the applications we make are intuitive for people to use.

3. How does Pycharm help developers in making GUI applications, what would be the difference if developers made GUI programs without GUI Frameworks such as Pycharm or Tkinter?

In using Pycharm it is easier for us to debug our code because of the assistance it gives us when programming and testing for errors.With the use of GUI frameworks programmers do not have to build code from scratch. We can look at frameworks as reliable tools and materials to build our project. Without GUI frameworks, there would be a lot more work for programmers to build code and test at the same time which is harder to manage.

4. What are the different platforms a GUI program may be created and deployed on? (Three is required then state why might a program be created on that specific platform)

One is the windows platform. They may create GUI programs in this platform for business platforms and easy access to a wide range of users. Then macOS is there for professional developers of GUI when they want unique functions and a seamless experience for creating programs. Last is the platform of HTML where it is mainly for creating web applications and designs. This is useful for people who want to target web design for GUI programs.

5. What is the purpose of app = QApplication(sys.argv), ex = App(), and sys.exit(app.exec_())? This line creates an instance of the QApplication class, which is necessary for any PyQt/PySide GUI application. ex =App() is for a custom c;ass that inherits Qwidget or Qmainwindow. Then the last code is for calling the event loop of app.exec() ensuring that the program closes properly

Conclusion

In this activity I was able to develop simple GUI programs using the Pycharm framework. It is comparable to the Tkinter but there are different syntax for different functionalities. I understood the basic structure of creating GUI programs for this framework. Then I was able to accomplish a basic registration application with GUI. I saw that GUI was able to make it easier to input data and use applications because of a simple an intuitive display is gives for a simple program like a registration application.