Qt Designer Guide [1]

CS355/CE373 Database Systems
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1. Installation

1.0.1 Linux (Ubuntu & Debian)

You can install Qt Designer using your package manager. Depending on your distribution and version you will have either Qt5 Designer or Qt6 Designer available:

In order to get the Qt6 Designer, you can use the following command:

```
sudo apt-get install designer-qt6
```

If Qt6 Designer is not available, you can download Qt Designer 5 using the following command:

```
sudo apt-get install qttools5-dev-tools
```

Once installed, Qt Designer will be available in the launcher.

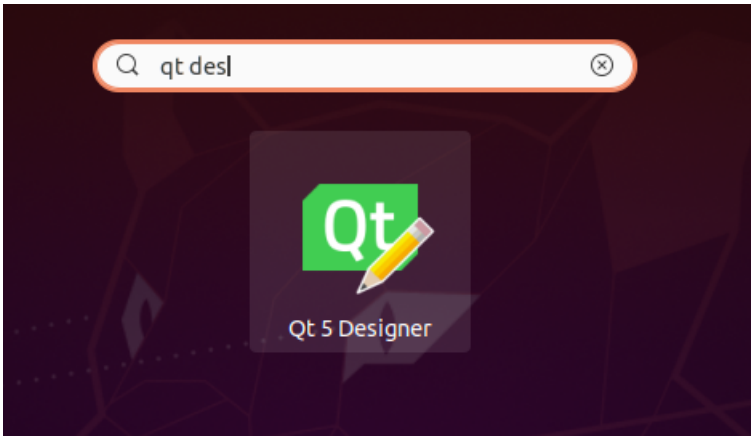

Figure 1.1: Qt5 Designer

1.0.2 Windows & MacOS

If you have the PyQt6 library installed, download the Qt Designer from here and run the file to complete the installation. Windows users should download the Windows Setup whereas Mac Users should download the Mac Setup.

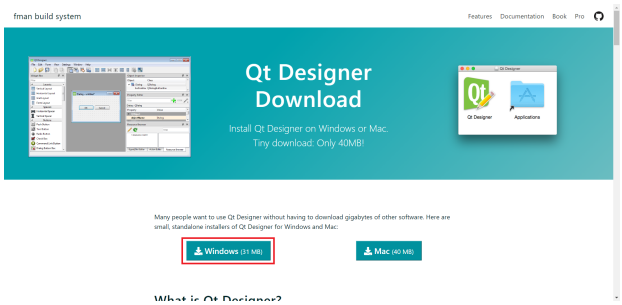

Figure 1.2: Download Setup

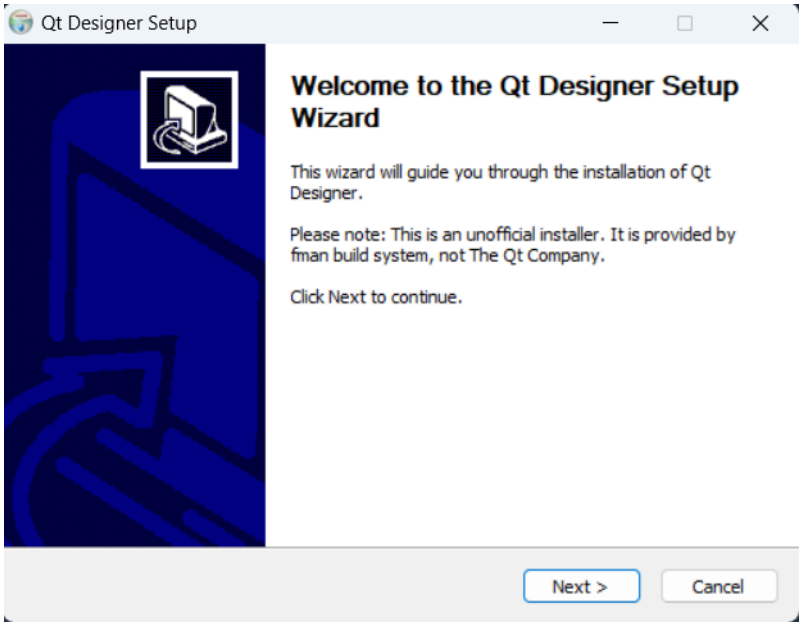

Figure 1.3: Qt Designer Setup

Once the setup has been downloaded, run the file and complete the default installation.

After the setup is complete, you should be able to launch Qt Designer and start designing apps.

2. Launching Qt Designer

Once you launch Qt Designer, the following dialog box will appear. Select **Main Window** and click on Create.

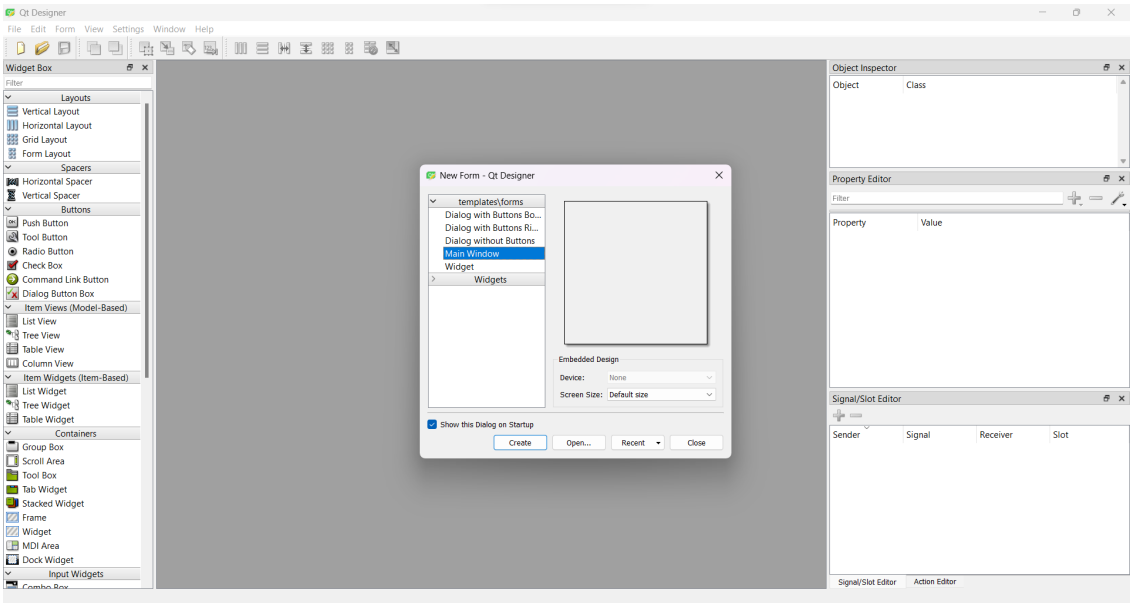

Figure 2.1: Startup Screen of Qt Designer

After clicking on Create, you will be redirected to the following screen. In figure 2.2, you can view the Main Windows, the list of available widgets available for drag and drop, Object Inspector which shows all the widgets, and a Property Editor for editing the property of a selected widget.

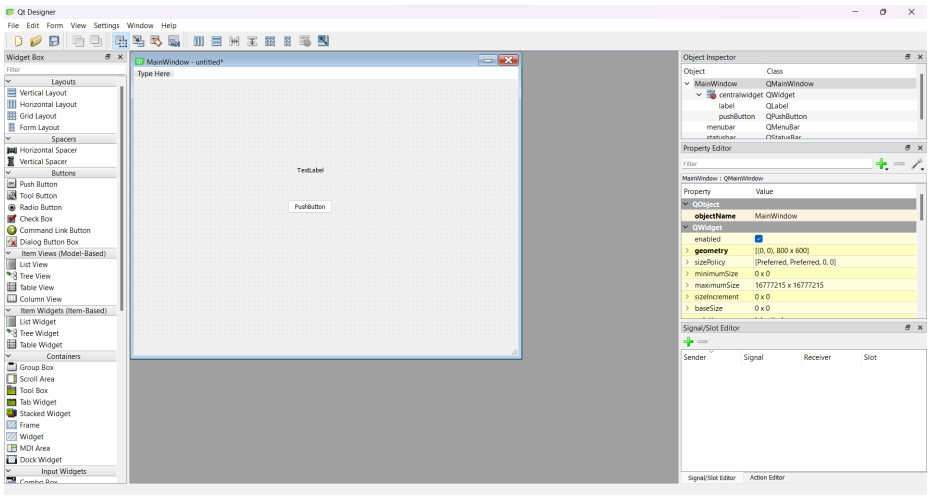

Figure 2.2: Main Window

In the Widget Box, search for the **Label** widget and the **Push Button**, and then place them on the Main Window using drag and drop. Your Main Window should be similar to 2.3

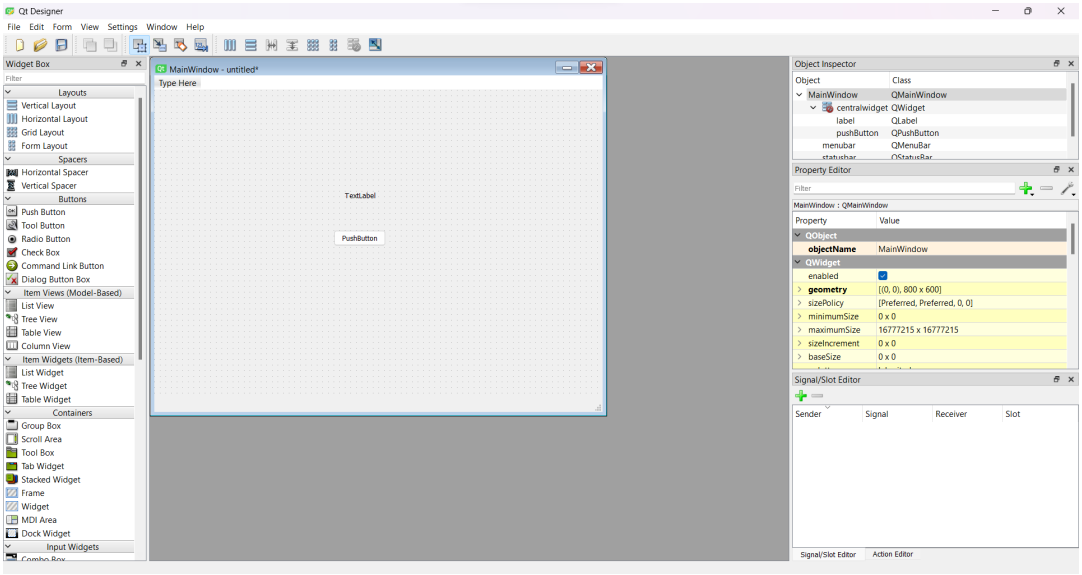

Figure 2.3: Main Window after adding a Push Button and Label.

Now, select the **Push Button** and in the Property Editor change the value of **objectName** from **pushButton** to **clickMeButton**. Please refer to figure 2.4

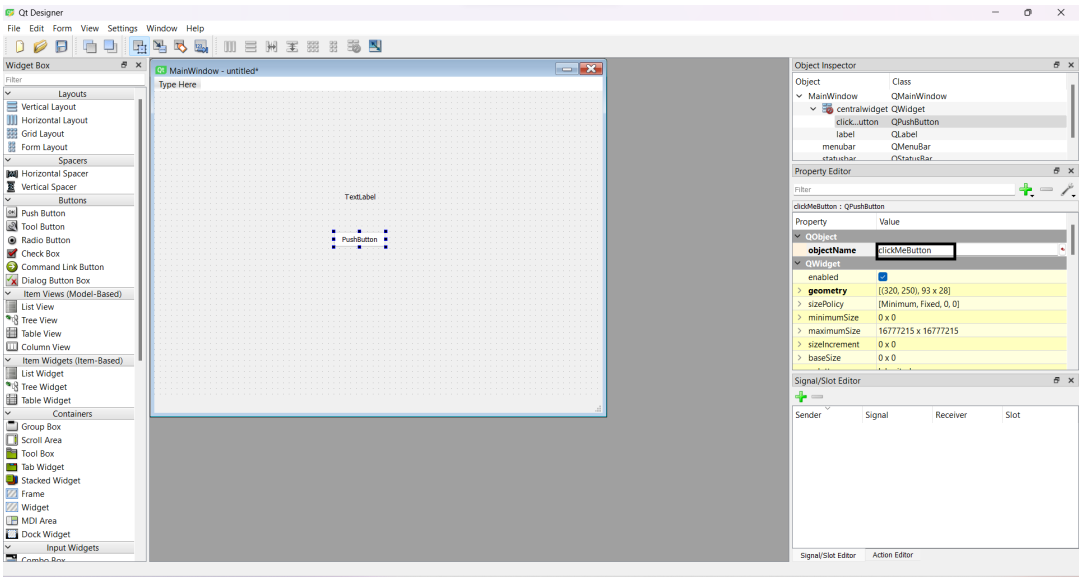

Figure 2.4: Edit the objectName of the Push Button

Similarly, you can also the display text of the Push Button by editing the text property. Change the display text of the Push Button by changing the value of **text** from **PushButton** to **Click Me!**. The main window should now look as follows:

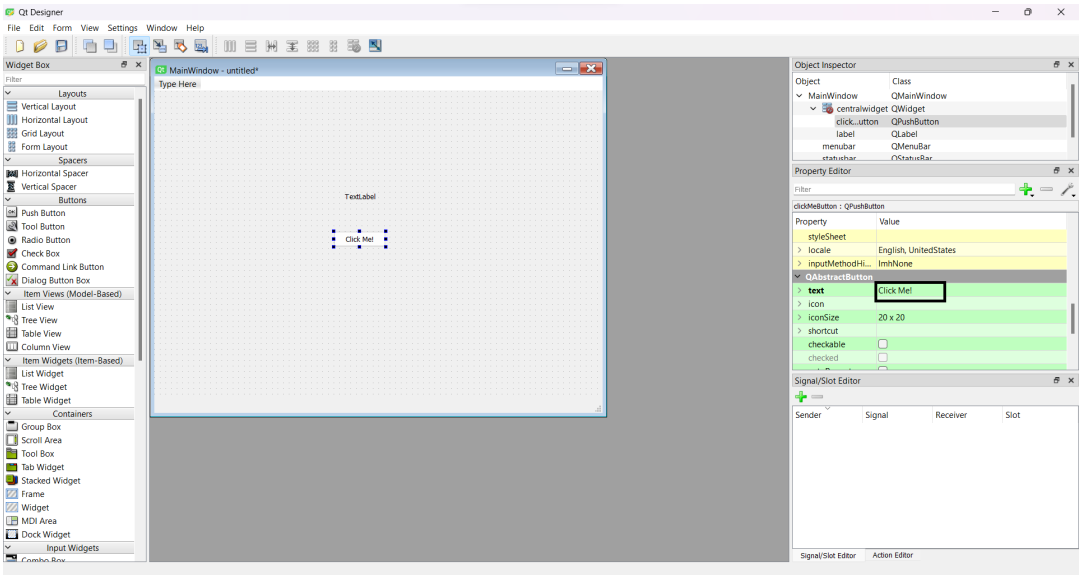

Figure 2.5: Edit the display text of the Push Button

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Qt Designer allows us to design apps but to add functionality to these apps we will have to write Python Code. However, first, save the file as `HelloWorld.ui` .

Now create `app.py` in the same directory as the `HelloWorld.ui` and then paste the following

code in app.py.

There are multiple things in this code that are related to the concepts of OOP that you might not understand. This is completely alright. You should instead focus on understanding the main process.

```
# Import all the required libraries
from PyQt6 import QtWidgets, uic ,QtGui,QtCore
import sys

class UI(QtWidgets.QMainWindow):
    def __init__(self):
        # Call the inherited classes __init__ method
        super(UI, self).__init__()
        # Load the .ui file
        uic.loadUi('HelloWorld.ui', self)
        # Show the GUI
        self.show()
        # Event Handling
        self.clickMeButton.clicked.connect(self.handle_click)
    def handle_click(self):
        self.label.setText("Welcome to QT Designer")



app = QtWidgets.QApplication(sys.argv) # Create an instance of QtWidgets.
   QApplication
window = UI() # Create an instance of our class
app.exec() # Start the application
```

Save the file and run app.py. The following window will appear.

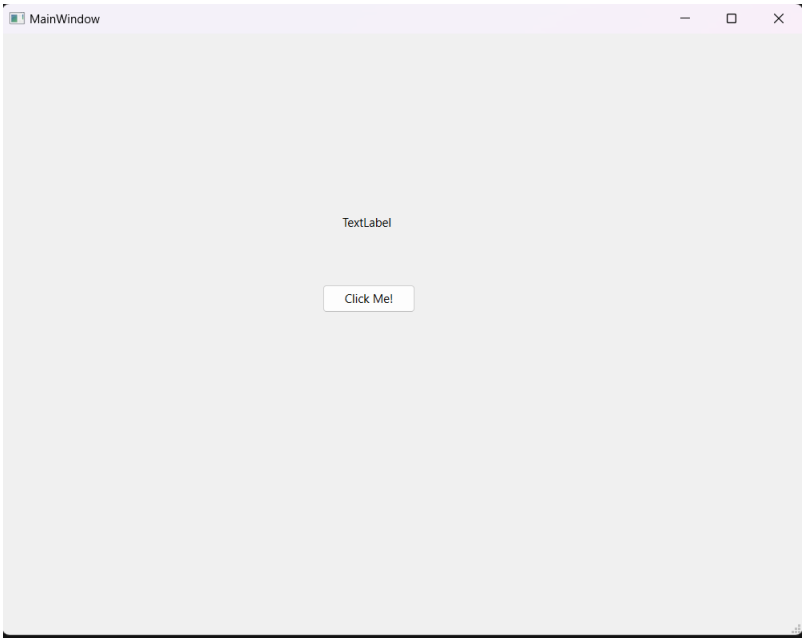

Figure 2.6: Main Window

Once you click on the **Click Me!** button, the text of the label will change.

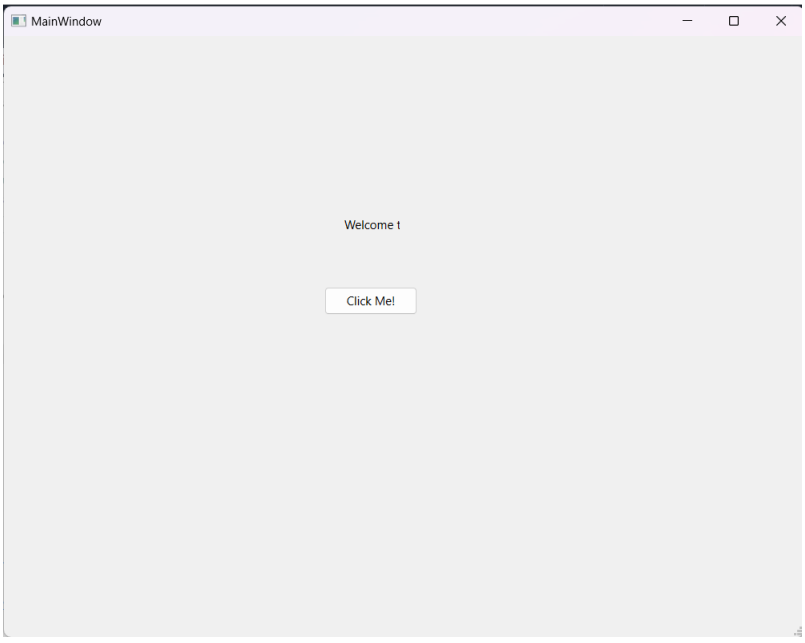

Figure 2.7: Welcome to QT Designer