

CIV 2802 – Sistemas Gráficos para Engenharia – PUC-Rio

Roteiro para criação de um programa simples para soma de dois números em Python usando Qt 5

1. Criação de um atalho para o programa QtDesigner

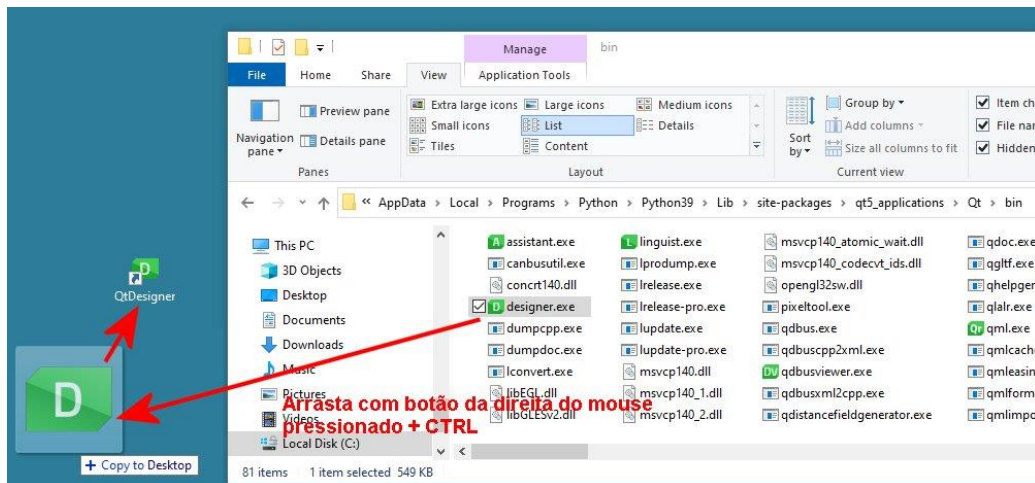
No Visual Studio Code:

```
pip install pyqt5-tools
```

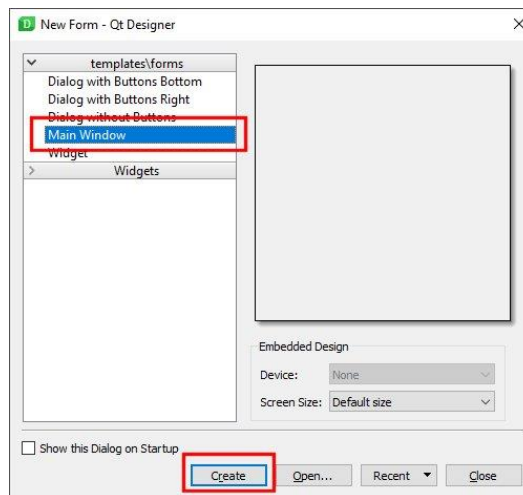
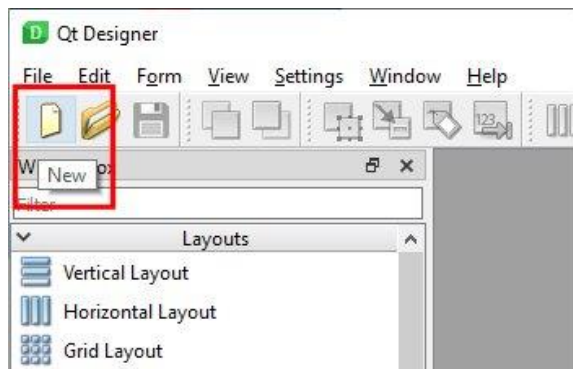
Na pasta

C:\Users\<user>\AppData\Local\Programs\Python\Python39\Lib\site-packages\qt5_applications\Qt\bin

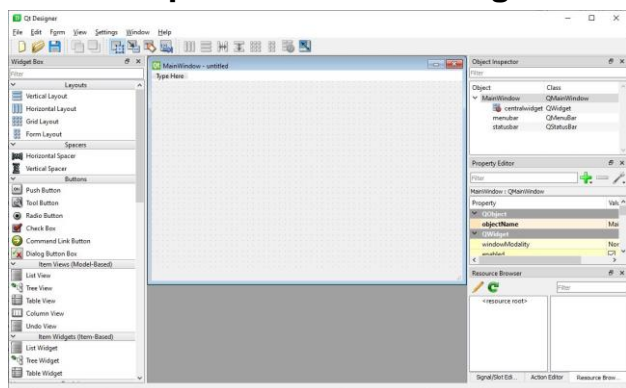
Adicione essa pasta no “path” do usuário e crie um atalho no desktop do executável designer.exe



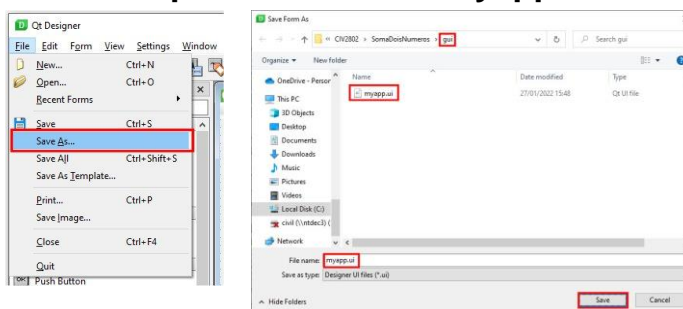
2. Execute o programa QtDesigner e crie uma nova Qt Main Window



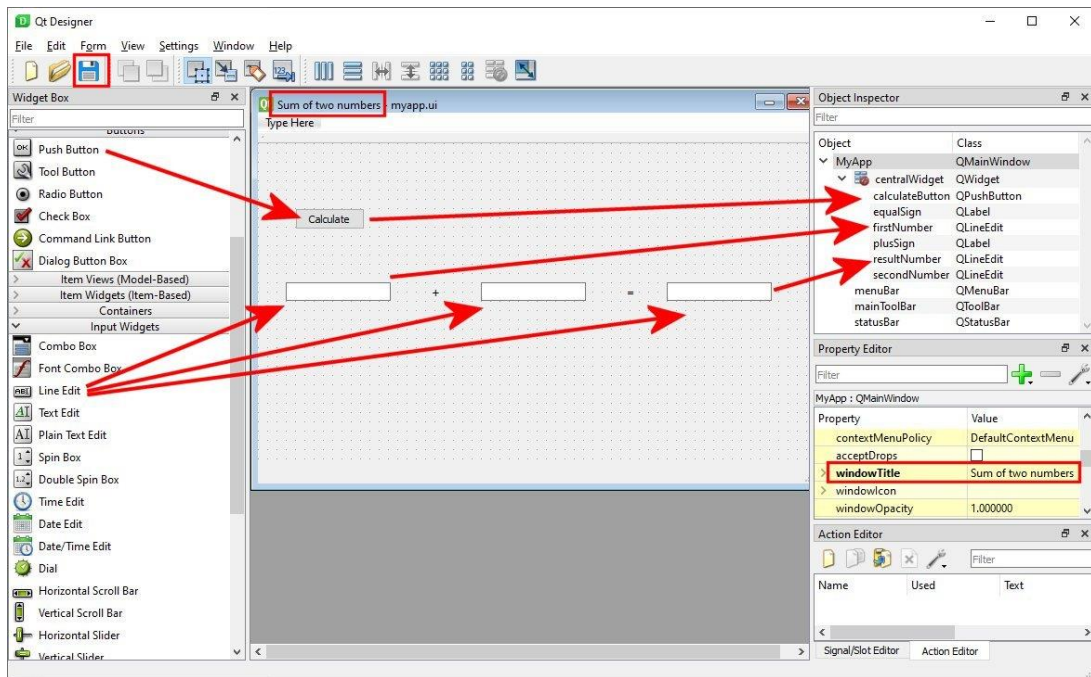
3. Pronto para criar interface gráfica



4. Save arquivo com nome myapp.ui

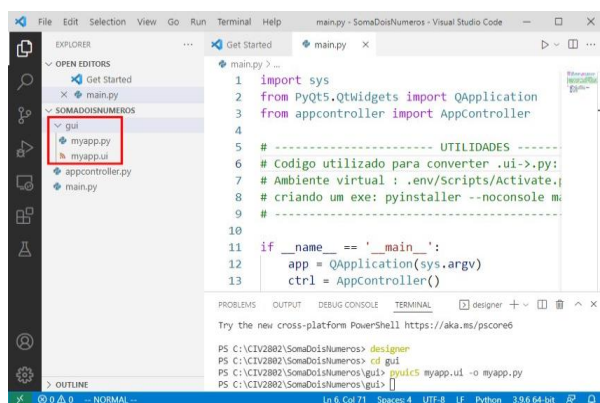
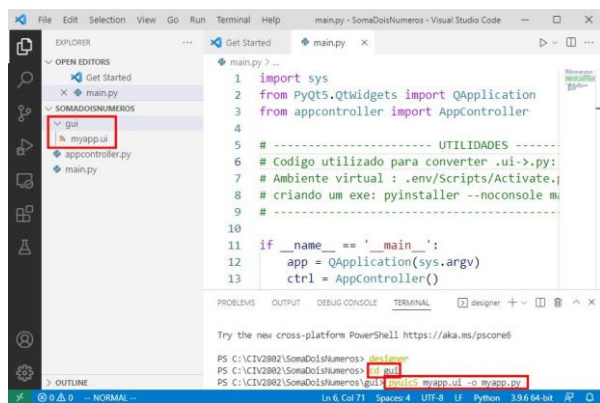


5. Crie os widgets da interface gráfica e modifique os nomes dos objetos (salve)



6. Crie o arquivo myapp.py

```
cd gui
pyuic5 myapp.ui -o myapp.py
```



(não modifique esse arquivo)

```
#!/usr/bin/env python
# -*- coding: utf-8 -*-
# Form implementation generated from reading ui file 'myapp.ui'
# Created by: PyQt5 UI code generator 5.15.4
#
# WARNING: Any manual changes made to this file will be lost when pyuic5 is
# run again. Do not edit this file unless you know what you are doing.
```

```
from PyQt5 import QtCore, QtGui, QtWidgets
```

```
class Ui_MyApp(object):
    def setupUi(self, MyApp):
        MyApp.setObjectName("MyApp")
        MyApp.resize(600, 400)
        self.centralWidget = QtWidgets.QWidget(MyApp)
        self.centralWidget.setObjectName("centralWidget")
        self.firstNumber = QtWidgets.QLineEdit(self.centralWidget)
        self.firstNumber.setGeometry(QtCore.QRect(30, 150, 113, 20))
        self.firstNumber.setObjectName("firstNumber")
        self.plusSign = QtWidgets.QLabel(self.centralWidget)
        self.plusSign.setGeometry(QtCore.QRect(166, 150, 51, 20))
        self.plusSign.setAlignment(QtCore.Qt.AlignCenter)
        self.plusSign.setObjectName("plusSign")
        self.secondNumber = QtWidgets.QLineEdit(self.centralWidget)
        self.secondNumber.setGeometry(QtCore.QRect(240, 150, 113, 20))
        self.secondNumber.setObjectName("secondNumber")
        self.equalSign = QtWidgets.QLabel(self.centralWidget)
        self.equalSign.setGeometry(QtCore.QRect(376, 150, 51, 21))
        self.equalSign.setAlignment(QtCore.Qt.AlignCenter)
        self.equalSign.setObjectName("equalSign")
        self.resultNumber = QtWidgets.QLineEdit(self.centralWidget)
        self.resultNumber.setGeometry(QtCore.QRect(440, 150, 113, 20))
        self.resultNumber.setObjectName("resultNumber")
        self.calculateButton = QtWidgets.QPushButton(self.centralWidget)
        self.calculateButton.setGeometry(QtCore.QRect(40, 70, 75, 23))
        self.calculateButton.setObjectName("calculateButton")
        MyApp.setCentralWidget(self.centralWidget)
        self.menuBar = QtWidgets.QMenuBar(MyApp)
        self.menuBar.setGeometry(QtCore.QRect(0, 0, 600, 21))
        self.menuBar.setObjectName("menuBar")
        MyApp.setMenuBar(self.menuBar)
        self.mainToolBar = QtWidgets.QToolBar(MyApp)
        self.mainToolBar.setObjectName("mainToolBar")
        MyApp.addToolBar(QtCore.Qt.TopToolBarArea, self.mainToolBar)
        self.statusBar = QtWidgets.QStatusBar(MyApp)
        self.statusBar.setObjectName("statusBar")
        MyApp.setStatusBar(self.statusBar)
```

```
self.retranslateUi(MyApp)
QtCore.QMetaObject.connectSlotsByName(MyApp)

def retranslateUi(self, MyApp):
    _translate = QtCore.QCoreApplication.translate
    MyApp.setWindowTitle(_translate("MyApp", "Sum of two numbers"))
    self.equalSign.setText(_translate("MyApp", "="))
    self.calculateButton.setText(_translate("MyApp", "Calculate"))
```

9. Arquivo appcontroller.py (classe AppController herda de QMainWindow e Ui_MyApp)

```
from PyQt5.QtWidgets import QMainWindow
from gui.myapp import Ui_MyApp

class AppController(QMainWindow, Ui_MyApp):
    def __init__(self):
        super().__init__()
        super().setupUi(self)

        # Connecting the signal
        self.calculateButton.clicked.connect(self.calculate)

    # @Slot()
    def calculate(self):
        a = float(self.firstNumber.text())
        b = float(self.secondNumber.text())
        self.resultNumber.setText(str(a+b))
```

10. Arquivo main.py

```
import sys
from PyQt5.QtWidgets import QApplication
from appcontroller import AppController

if __name__ == '__main__':
    app = QApplication(sys.argv)
    ctrl = AppController()
    ctrl.show()
    app.exec_()
```

11. Execução

