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#!/usr/bin/python
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from PyQt4 import QtCore, QtGui
import serial
import sys
SERIALPORT = '/dev/ttyACM1'
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class Ui_MainWindow(object):
    def setupUi(self, MainWindow):
        MainWindow.setObjectName("MainWindow")
        MainWindow.resize(800, 600)
        MainWindow.setMaximumSize(QtCore.QSize(800, 600))
        self.centralwidget = QtGui.QWidget(MainWindow)
        self.centralwidget.setObjectName("centralwidget")
        self.pushButton = QtGui.QPushButton(self.centralwidget)
        self.pushButton.setGeometry(QtCore.QRect(220, 290, 251, 61))
        self.pushButton.setObjectName("pushButton")
        self.pushButton_2 = QtGui.QPushButton(self.centralwidget)
        self.pushButton_2.setGeometry(QtCore.QRect(680, 510, 85, 27))
        self.pushButton_2.setObjectName("pushButton_2")
        self.textEdit = QtGui.QTextEdit(self.centralwidget)
        self.textEdit.setGeometry(QtCore.QRect(60, 140, 561, 94))
        self.textEdit.setObjectName("textEdit")
        self.lineEdit = QtGui.QLineEdit(self.centralwidget)
        self.lineEdit.setGeometry(QtCore.QRect(60, 50, 461, 23))
        self.lineEdit.setObjectName("lineEdit")
        self.pushButton_3 = QtGui.QPushButton(self.centralwidget)
        self.pushButton_3.setGeometry(QtCore.QRect(220, 370, 251, 61))
        self.pushButton_3.setObjectName("pushButton_3")
        MainWindow.setCentralWidget(self.centralwidget)
        self.menubar = QtGui.QMenuBar(MainWindow)
        self.menubar.setGeometry(QtCore.QRect(0, 0, 800, 27))
        self.menubar.setObjectName("menubar")
        self.menuMenu = QtGui.QMenu(self.menubar)
        self.menuMenu.setObjectName("menuMenu")
        MainWindow.setMenuBar(self.menubar)
        self.statusbar = QtGui.QStatusBar(MainWindow)
        self.statusbar.setObjectName("statusbar")
        MainWindow.setStatusBar(self.statusbar)
        self.menubar.addAction(self.menuMenu.menuAction())

        self.retranslateUi(MainWindow)
        #QtCore.QObject.connect(MainWindow, QtCore.SIGNAL("destroyed()"), MainWindow.deleteLater)

        QtCore.QObject.connect(self.pushButton, QtCore.SIGNAL("clicked()"), invia_arduino_on)
        QtCore.QObject.connect(self.pushButton_3, QtCore.SIGNAL("clicked()"), invia_arduino_off)
        QtCore.QObject.connect(self.pushButton_2, QtCore.SIGNAL("clicked()"), quit_gui)

        QtCore.QMetaObject.connectSlotsByName(MainWindow)

    def retranslateUi(self, MainWindow):
        MainWindow.setWindowTitle(QtGui.QApplication.translate("MainWindow", "Python QT e Arduino Esercizio 1", None, QtGui.QApplication.UnicodeUTF8))

        self.pushButton.setText(QtGui.QApplication.translate("MainWindow", "Led 13 On", None, QtGui.QApplication.UnicodeUTF8))

        self.pushButton_2.setText(QtGui.QApplication.translate("MainWindow", "Quit", None, QtGui.QApplication.UnicodeUTF8))

        self.lineEdit.setText(QtGui.QApplication.translate("MainWindow", "Prova Scrittura Programma Python Qt4", None, QtGui.QApplication.UnicodeUTF8))

        self.pushButton_3.setText(QtGui.QApplication.translate("MainWindow", "Led 13 Off", None, QtGui.QApplication.UnicodeUTF8))

        self.menuMenu.setTitle(QtGui.QApplication.translate("MainWindow", "Menu", None, QtGui.QApplication.UnicodeUTF8))

def invia_arduino_on():
    testo_arduino = "0"
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        arduino.write(testo_arduino)
        msg="Acceso Led 13"
        ui.lineEdit.setText(msg)
        ui.textEdit.append(str(msg))

def invia_arduino_off():
    testo_arduino = "1"
    arduino.write(testo_arduino)
    msg="Spento Led 13"
    ui.lineEdit.setText(msg)
    ui.textEdit.append(str(msg))

def quit_gui():
    quit()

if __name__ == "__main__":
    app = QtGui.QApplication(sys.argv)
    MainWindow = QtGui.QMainWindow()
    ui = Ui_MainWindow()
    ui.setupUi(MainWindow)
    ok=1
    while ok==1:
        try:
            arduino = serial.Serial(SERIALPORT, 9600, timeout=1)
            ok=0
        except:
            QtGui.QMessageBox.warning(MainWindow, "Errore Porta seriale", "Attenzione!
Verificare porta seriale")
            reply = QtGui.QMessageBox.question(MainWindow, "Errore Porta seriale", "Vuoi
chiudere l'applicazione?", QtGui.QMessageBox.Yes | QtGui.QMessageBox.No, QtGui.QMessageBox.Yes)
            if reply == QtGui.QMessageBox.Yes:
                quit()
            else:
                text_in, ok_tx = QtGui.QInputDialog.getText(MainWindow, 'Input
Dialog','Porta Seriale Corretta:', QtGui.QLineEdit.Normal,SERIALPORT)
                SERIALPORT=str(text_in)
    MainWindow.show()
    sys.exit(app.exec_())
    arduino.close()

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