# Software Engineering

## User interfaces

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# Qt

# Qt

Framework d'IHM

open (LGPL V3)

Since 1995

Designing tools -> Qt design : https://www.qt.io/product/ui-design-tools

Simple

Available in several languages, especially C++ and Python

# PySide -> Qt for Python

```python
import sys
import random
from PySide6 import QtCore, QtWidgets, QtGui

class MyWidget(QtWidgets.QWidget):
    def __init__(self):
        super().__init__()

        self.hello = ["Hallo Welt", "Hei maailma", "Hola Mundo", "Привет мир"]

        self.button = QtWidgets.QPushButton("Click me!")
        self.text = QtWidgets.QLabel("Hello World",
                                     alignment=QtCore.Qt.AlignCenter)

        self.layout = QtWidgets.QVBoxLayout(self)
        self.layout.addWidget(self.text)
        self.layout.addWidget(self.button)

        self.button.clicked.connect(self.magic)

    @QtCore.Slot()
    def magic(self):
        self.text.setText(random.choice(self.hello))
```
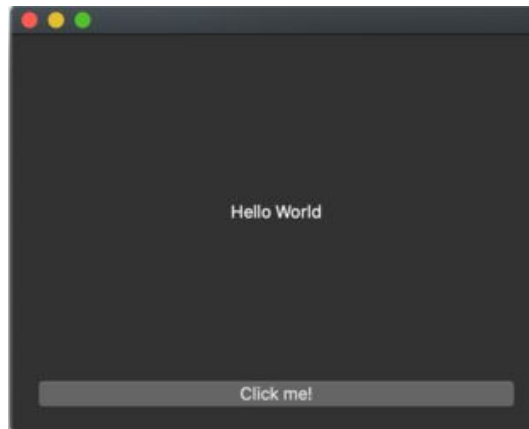
```python
if __name__ == "__main__":
    app = QtWidgets.QApplication([])

    widget = MyWidget()
    widget.resize(800, 600)
    widget.show()

    sys.exit(app.exec())
```

# PySide 6 : Some Qobjects

- QVBoxLayout
  - QFormLayout
    - addRow
    - QLineEdit
  - QComboBox
  - QGridLayout
    - QListWidget
- QCloseEvent

…

There is a lot more !

# Pyside 6 : Usefull Links

Documenation for PySide versions : https://doc.qt.io/qt.html

Quickstart : https://doc.qt.io/qtforpython-6/quickstart.html

Tutorials to go deeper : https://doc.qt.io/qtforpython-6/tutorials/index.html

External PySide libraries : https://doc.qt.io/qtforpython-6/examples/index.html

Helps : https://doc.qt.io/qtforpython-6/

Tutorial PySide 5 : https://courspython.com/interfaces.html