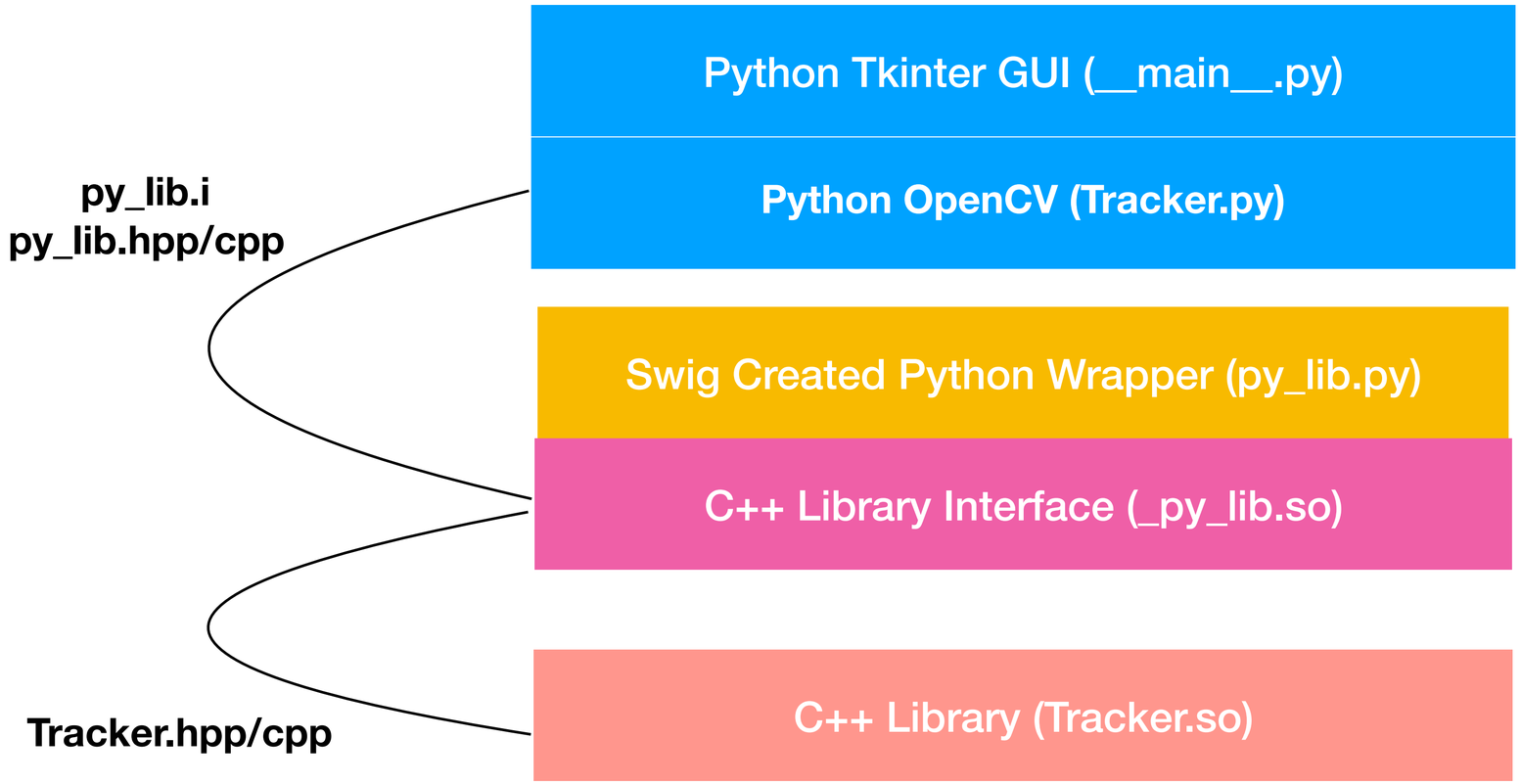
Swig


Python Tkinter GUI (__main__.py)
Python OpenCV (Tracker.py)
py_lib.i
py_lib.hpp/cpp
Swig Created Python Wrapper (py_lib.py)
C++ Library Interface (_py_lib.so)
C++ Library (Tracker.so)
Tracker.hpp/cpp

Install OpenCV

git clone https://github.com/opencv/opencv.git
cd opencv
git clone https://github.com/opencv/opencv_contrib.git

mkdir release
cd release

cmake .. -DCMAKE_BUILD_TYPE=Release -DBUILD_EXAMPLES=ON
-DOPENCV_GENERATE_PKGCONFIG=ON -DCMAKE_INSTALL_PREFIX=/usr/local
-DOPENCV_EXTRA_MODULES_PATH=../opencv_contrib/modules

make -j7
sudo make install

Install OpenCV-Swig

```
git clone https://github.com/renatoGarcia/opencv-swig.git
cd opencv-swig

mkdir build
cd build

cmake .. -DCMAKE_INSTALL_PREFIX=/usr/local
make install
```

Build Module (py_lib as example)

create a project with py_lib.i, py_lib.hpp/cpp

swig -I/usr/local/include/opencv4 -I/usr/local/share/swig/any -python -c++ py_lib.i

g++ -fPIC -c py_lib_wrap.cxx py_lib.cpp $(python3-config --include) $(pkg-config opencv4 --cflags) -std=c++11

g++ -shared -rpath /usr/local/lib/ py_lib_wrap.o py_lib.o -o _py_lib.so -L/Library/Frameworks/Python.framework/Versions/3.8/lib -lpython3.8 `pkg-config opencv4 —libs`

Makefile

- write py_lib.i
  write py_lib.hpp/cpp
  swig to generate py_lib_wrap.cxx & py_lib.py
  g++ to genearte py_lib.o py_lib_wrap.o
  g++ to generate _py_lib.so

```
all: _py_lib.so

_py_lib.so: py_lib_wrap.o py_lib.o
    $(MAKE) -C libs
    $(CXX) -shared -rpath ${RPATH} $^ ${LIBS} ${PROJLIBS} -o $@

py_lib_wrap.o: py_lib_wrap.cxx
    $(CXX) ${CXXFLAGS} -c $? -o $@

py_lib.o: py_lib.cpp
    $(CXX) ${CXXFLAGS} -c $? -o $@

py_lib_wrap.cxx : py_lib.i py_lib.hpp
    swig ${SWIGINC} -python -c++ py_lib.i
```