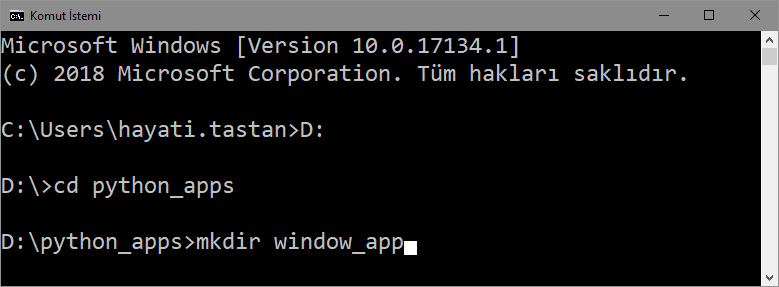
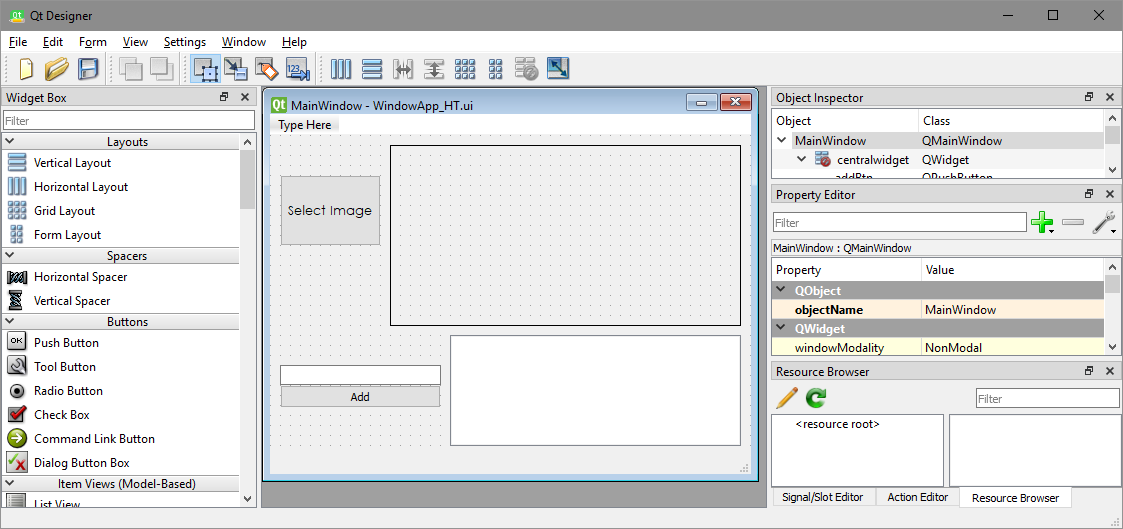
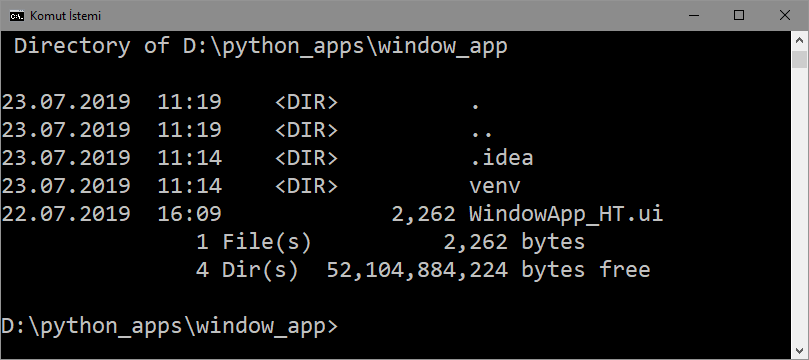
1. Create a dir for the python project in python\_apps (e.g. D:\python\_apps\window\_app)



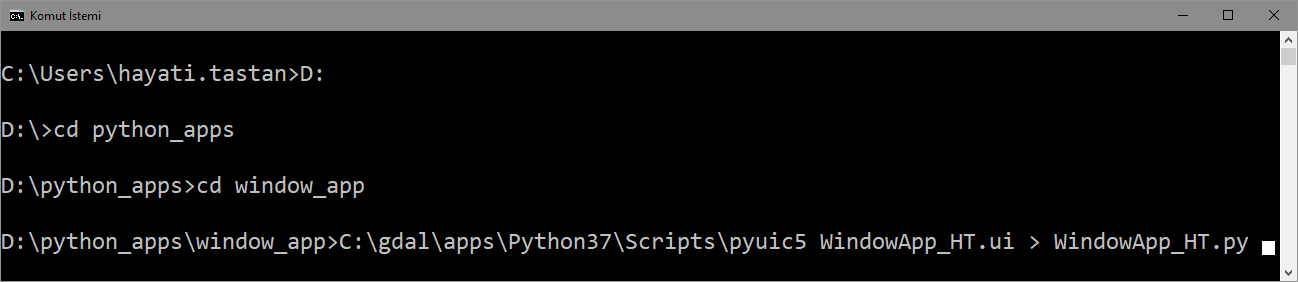
1. Create a \*.ui using Qt designer in Project dir (e.g. WindowsApp\_HT.ui)



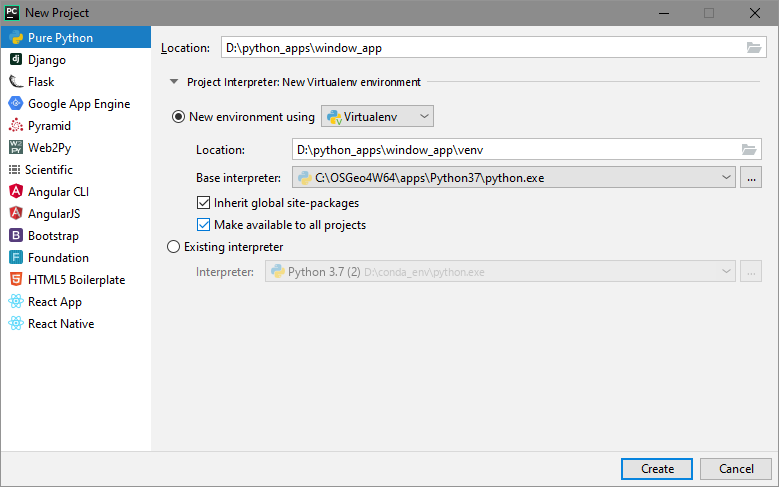


1. Convert ui to py at command prompt:

**C:\gdal\apps\Python37\Scripts\pyuic5 WindowApp\_HT.ui > WindowApp\_HT.py**

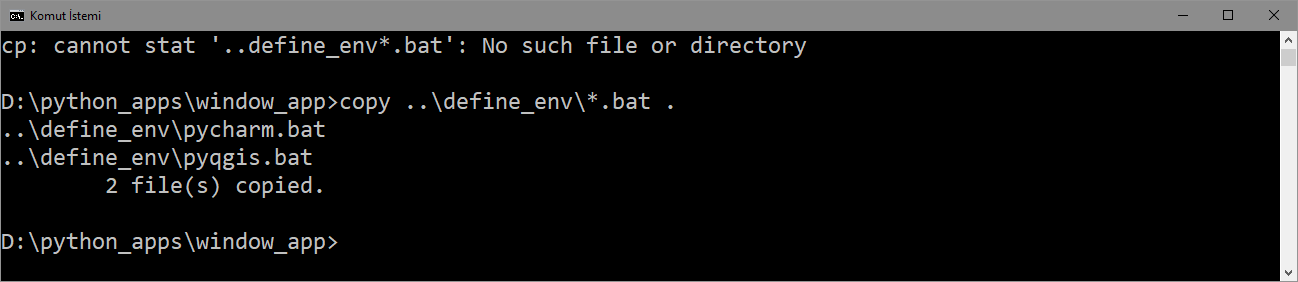


1. Create a pyCharm Project for the Project dir (e.g: C:\pycharm\_apps\window\_app)



1. Copy **pycharm.bat** and **pyqgis.bat** into pyCharm Project dir

**copy ..\window\_app>cp ..\define\_env\\*.bat .**



1. In pyCharm termninal

**Run pycharm.bat**

**Or:**

@echo off

SET OSGEO4W\_ROOT=C:\OSGeo4W64

call "%OSGEO4W\_ROOT%"\bin\o4w\_env.bat

call "%OSGEO4W\_ROOT%"\apps\grass\grass-7.4.0\etc\env.bat

@echo off

path %PATH%;%OSGEO4W\_ROOT%\apps\qgis\bin

path %PATH%;%OSGEO4W\_ROOT%\apps\grass\grass-7.4.0\lib

path %PATH%;C:\OSGeo4W64\apps\Qt5\bin

path %PATH%;C:\OSGeo4W64\apps\Python37\Scripts

set PYTHONPATH=%PYTHONPATH%;%OSGEO4W\_ROOT%\apps\qgis\python

set PYTHONHOME=%OSGEO4W\_ROOT%\apps\Python37

set PATH=C:\Program Files\Git\bin;%PATH%

start "PyCharm aware of QGIS" /B "C:\Program Files\JetBrains\PyCharm 2019.1\bin\pycharm64.exe" %\*

cmd.exe

**run pyqgis.bat**

**or:**

@echo off

SET OSGEO4W\_ROOT=C:\OSGeo4W64

call "%OSGEO4W\_ROOT%"\bin\o4w\_env.bat

call "%OSGEO4W\_ROOT%"\apps\grass\grass-7.4.0\etc\env.bat

path %PATH%;%OSGEO4W\_ROOT%\apps\qgis\bin

path %PATH%;%OSGEO4W\_ROOT%\apps\grass\grass-7.4.0\lib

path %PATH%;C:\OSGeo4W64\apps\Qt5\bin

path %PATH%;C:\OSGeo4W64\apps\Python37\Scripts

set PYTHONPATH=%PYTHONPATH%;%OSGEO4W\_ROOT%\apps\qgis\python

set PYTHONHOME=%OSGEO4W\_ROOT%\apps\Python37

set PATH=C:\Program Files\Git\bin;%PATH%

cmd.exe

**Cd C:\python\_projects\windows\_app\venv\Scripts**

**path %PATH%;C:\OSGeo4W64\bin**

**Set %PATH%;**

(install required packages with pip)

**pip install --trusted-host pypi.org --trusted-host files.pythonhosted.org pyqt5**

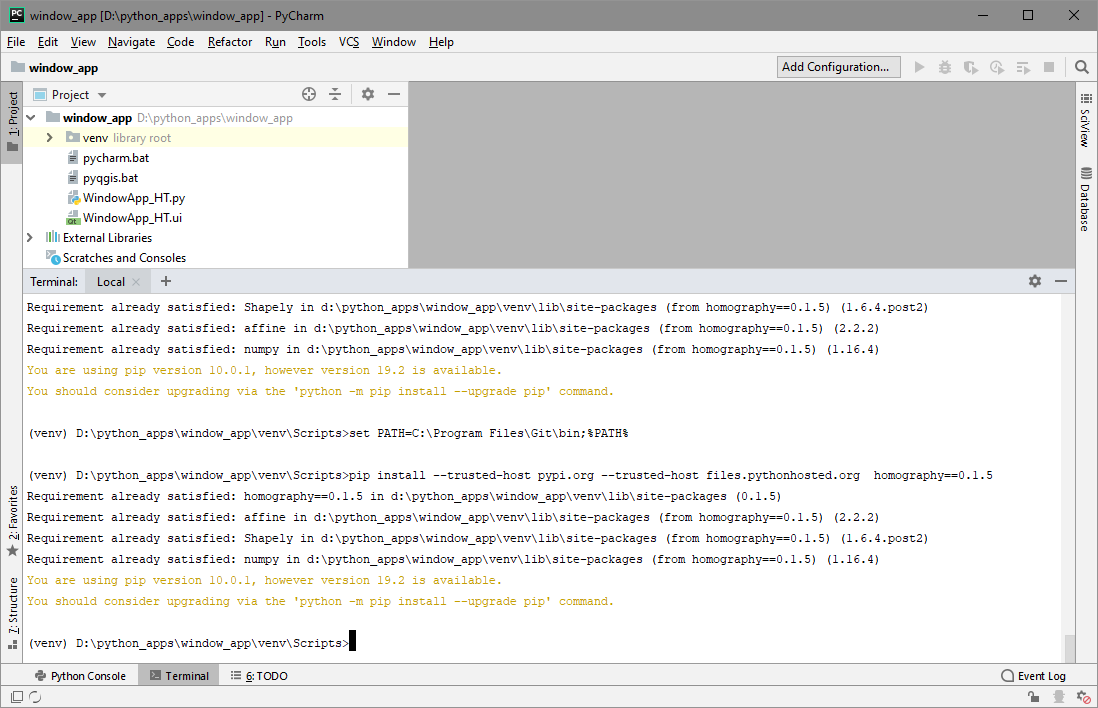
**pip install --trusted-host pypi.org --trusted-host files.pythonhosted.org pyqt5-stubs**

**pip install --trusted-host pypi.org --trusted-host files.pythonhosted.org opencv-python==4.1.0.25**

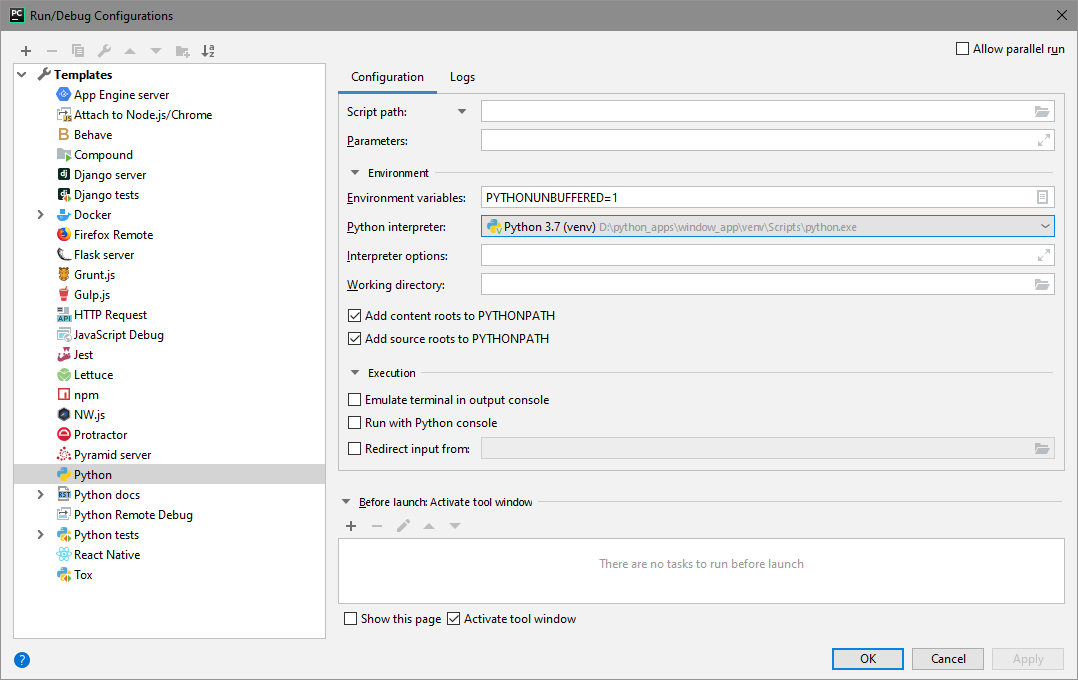
**pip install --trusted-host pypi.org --trusted-host files.pythonhosted.org opencv-contrib-python==4.1.0.25**

**pip install --trusted-host pypi.org --trusted-host files.pythonhosted.org matplotlib==3.1.0**

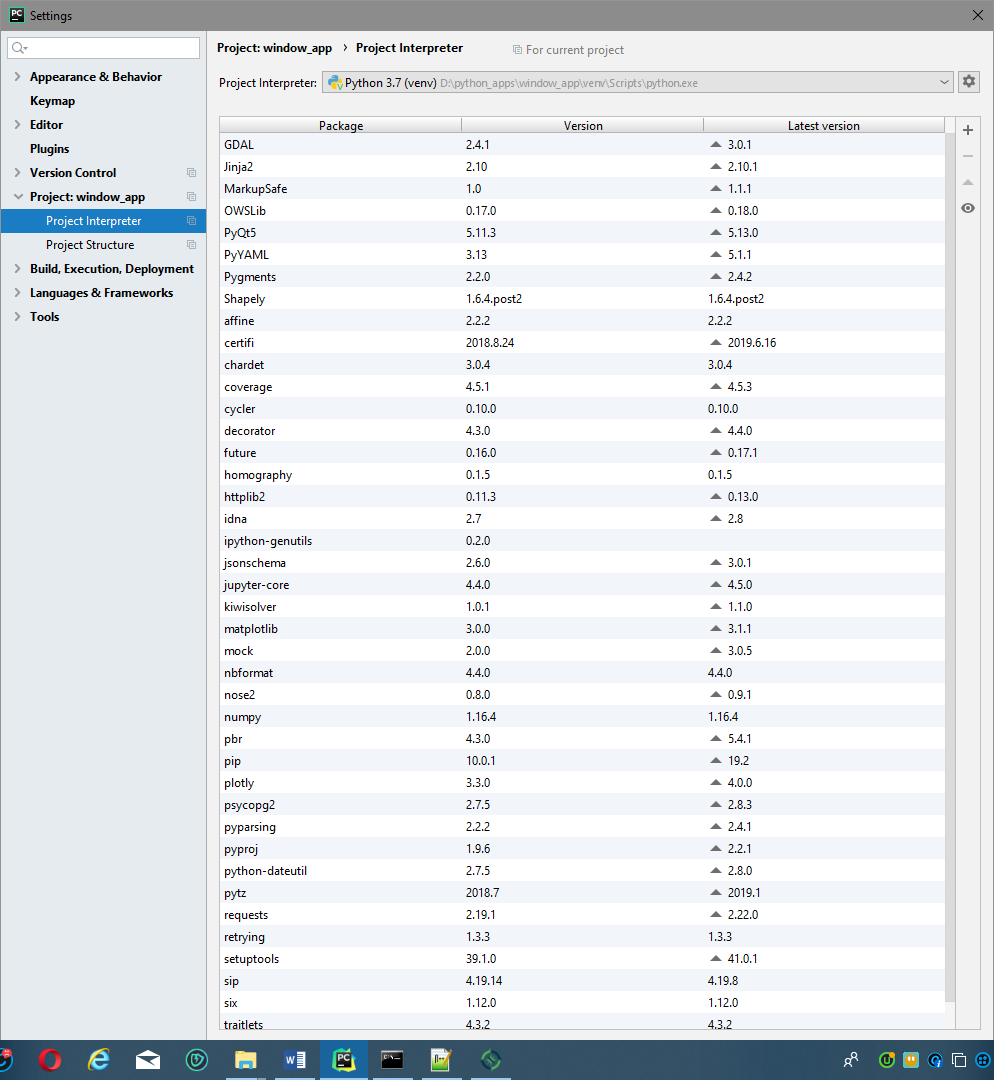
**pip install --trusted-host pypi.org --trusted-host files.pythonhosted.org homography==0.1.5**



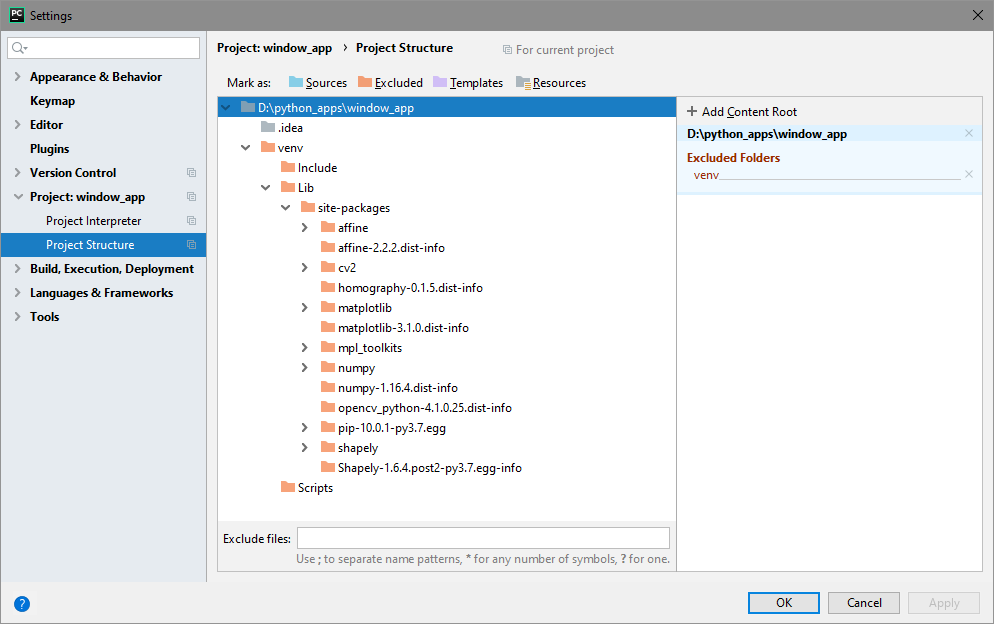
1. Run /Edit config, Templates/Python:



1. File /Settings, Project: window\_app/Project Interpreter:



1. File /Settings, Project: window\_app/Project Structure: (to see site-packages select Lib/site-packages)



1. Run **WindowsApp\_HT.py:**

