# How to develop plugin in QGIS by using Python

In this content we will dicribt how to develop plugin by using Python 3 and above variations and that for QGIS 3 and above variations

1. Download OSGeo4W.  
   first you should download OSGeo4W form <https://qgis.org/en/site/forusers/download.html#> this web site
2. Go to the folder where you save your OSGeo4w go to bin>qgis\_bin
3. Go to plugins>Manage and install plugins>All> search for plugin builder and install it and then go to Setting>Show also experimental plugins and click on it go to All and search for plugin relaod
4. Create new plugin then when you finish it you should copy that given
5. move where you save your plugin open pb\_tool file and add given path in the 4. step cope it to plugin\_path:
6. You should add pyqgis.py file from my Github link <https://github.com/ABDURRAHMANSER/GMT456> and download it and add it to OSGeo4W and
7. Open the file that you already downloaded. You will get command window you should install pb\_tool library by this command  
   python3 -m pip install pb\_tool . to make sure that you download it write pb\_tool you should get the description about this library
8. Move to where you add you new plugin and copy the folder path of it the return to our command window and write cd “your plugin file path” then write pb\_tool deploy
9. Then move to your QGIS and use plugin reload to then go to Manage and install plugins >installed>click on your plugin then you can see it on your new plugin in QGIS
10. Then go to OSGeo4W folder>bin>qgis-designer>press open button>show the folder where you save your new plugin from her you can add button entry box and so on

**Link QT with QGIS**

In this part you will learn how to link QT of plugin with action of press button and write in entry box. In order to do it you have to go to file where you have saved open it >open “plugin\_name”.py file from PyQt5.QtWidgets import QFileDialog

> delete all thing self.first\_start attribute

Add self.dlg = Shp\_fils\_openDialog() line to \_\_init\_\_ method and that for defined every thing in your QT and add to \_\_init\_\_ also

self.toolbar = self.iface.addToolBar(**u'Shp\_fils\_open'**)  
self.toolbar.setObjectName(**u'Shp\_fils\_open'**)

Add to initGui method self.dlg.your\_toolButton\_name.clicked.connect(self.openShpFile)

That to make the program open the file that you show when you click on it

Add this method for show the layers to the combo box

**def** loadVectors(self):  
*# load vectors for QGIS table of contents* self.dlg.your\_comboBox\_name.clear()  
 layers = [layer **for** layer **in** QgsProject.instance().mapLayers().values()]  
 vector\_layers = []  
 **for** layer **in** layers:  
 **if** layer.type() == QgsMapLayer.VectorLayer:  
 vector\_layers.append(layer.name())  
 self.dlg.your\_combobox\_name.addItems(vector\_layers)

Then add one more method for open shp file

**def** openShpFile(self):  
 inFile = str(QFileDialog.getOpenFileName(caption=**"open shapefile"** , filter=**"shapefiles (\*.shp)"**)[0])  
 **if** inFile **is not** None:  
 self.iface.addVectorLayer(inFile, str.split(os.path.basename(inFile), **"."**)[0], **"ogr"**)  
 self.loadVectors()

And be that you finish all thing about make plugin for open shp file by using python and

**IMPORTANT NOT:**

With every chang on your QT our python files you should go to 8.step