

USIT 6P4 Principles of Geographic Information Systems Practical #6

Name	Sanjeev Gupta	Roll Number	21302B0023
Class	TY BSC IT	Division	C
Subject/Course	USIT 6P4 Principles of Geographic Information Systems		
Topic	Georeferencing Topo Sheets and Scanned Maps Georeferencing Aerial Imagery Digitizing Map Data,		

Explain about Georeferencing.

- Georeferencing is the process of assigning real-world geographic coordinates - latitude and longitude to digital images or spatial data. It involves aligning spatial data with a coordinate system so that it can be accurately located and displayed on a map or within a geographic information system. -

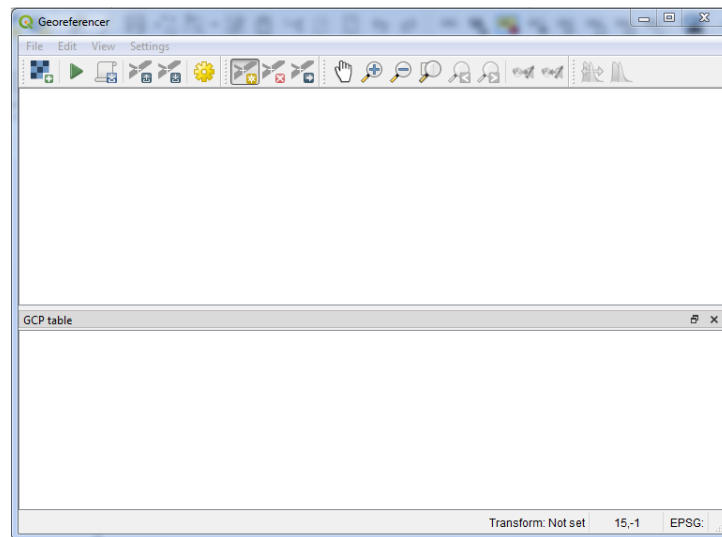
- Georeferencing is essential for tasks such as map making, spatial analysis, and geographic data integration. It enables users to overlay and compare different datasets, perform spatial analysis, and create meaningful visualizations for various applications such as urban planning, environmental monitoring, agriculture, and disaster management.

Georeferencing Topo Sheets and Scanned Maps. [Write steps and insert Screenshot]

Go to Layers → Add Layer → Add vector Layer
Select GIS_Workshop\Manual\Prac06\IND_adm0.shp
Zoom in to Mumbai region in the layer.



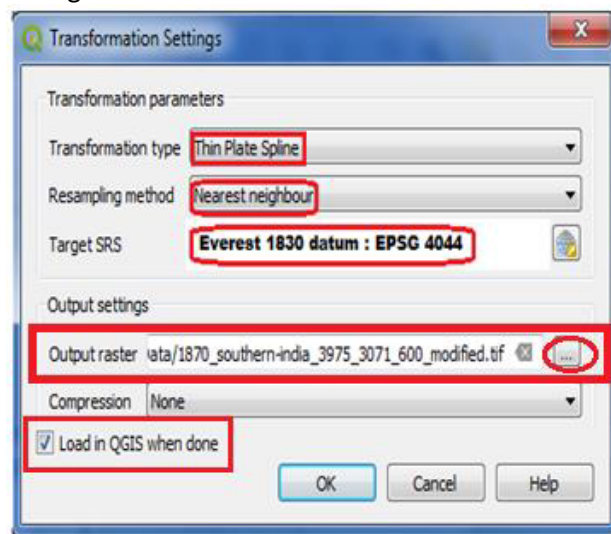
Go to Raster → Georeferencer



File → Open Raster

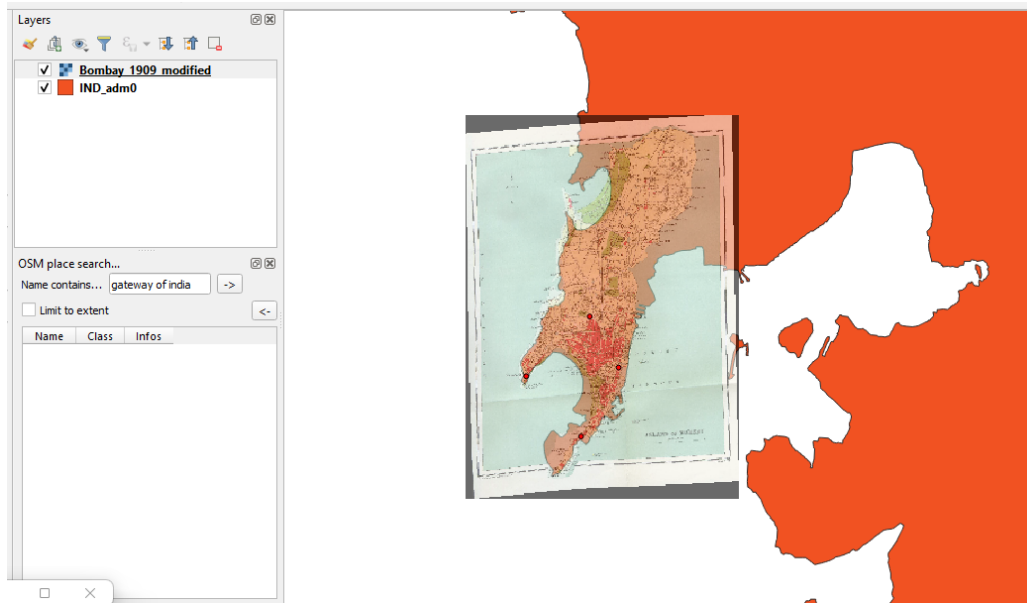
Select file “1870_southern-india_3975_3071_600.jpg” from project data folder

Go to Settings → Transformation Settings



Press “RUN”

Output -



Georeferencing Aerial Imagery of Mumbai map [Write steps and insert Screenshot]

Problem statement:

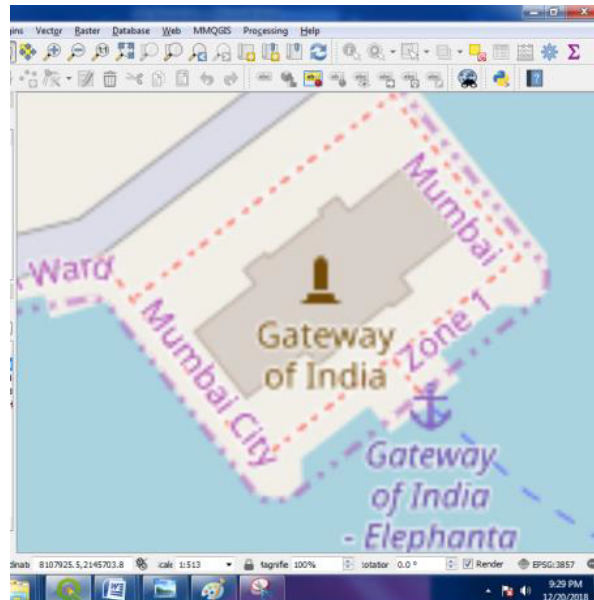
Georeferencing Aerial Imagery of North India map [Write steps and insert Screenshot]

Go to Web Menu → OpenLayerPlugin → OpenStreetMap → OpenStreetMap

Go to Project → Properties → Set CRS to EPSG 3857

Go to View → Panels → select OSM Place search

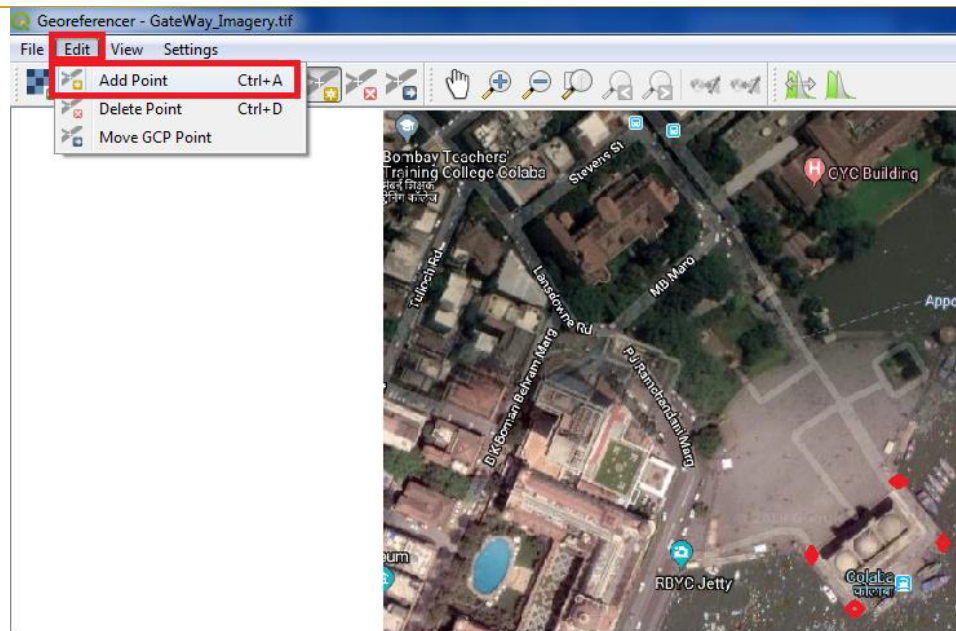
Find The Gateway of India, Mumbai



Go to Raster → Georefrencer

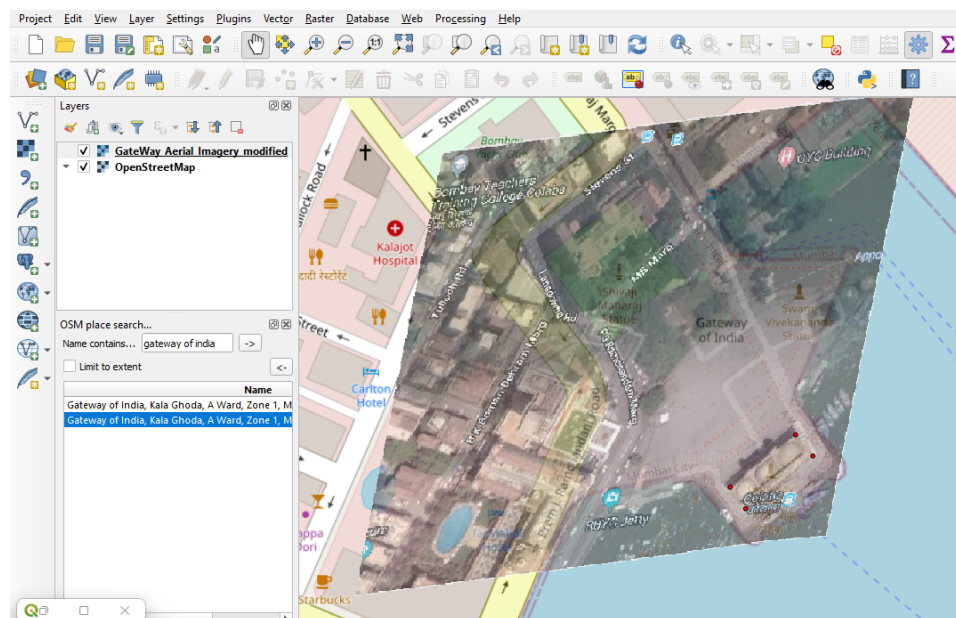
File → Open Raster

Select file "Gateway_Imagery.tif" from project data folder



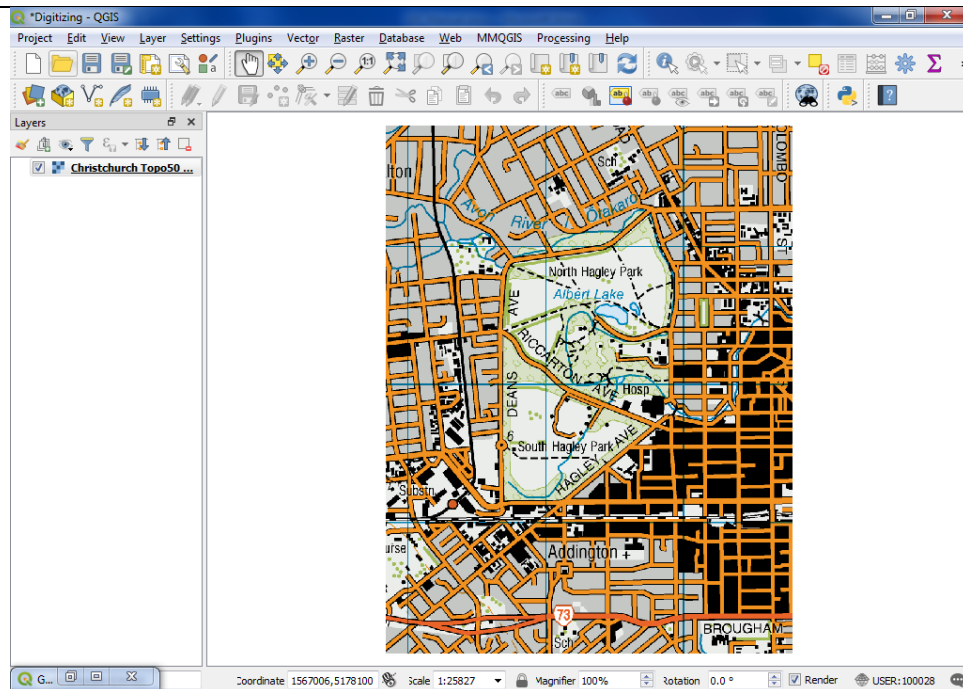
Add Points then Run

Output -

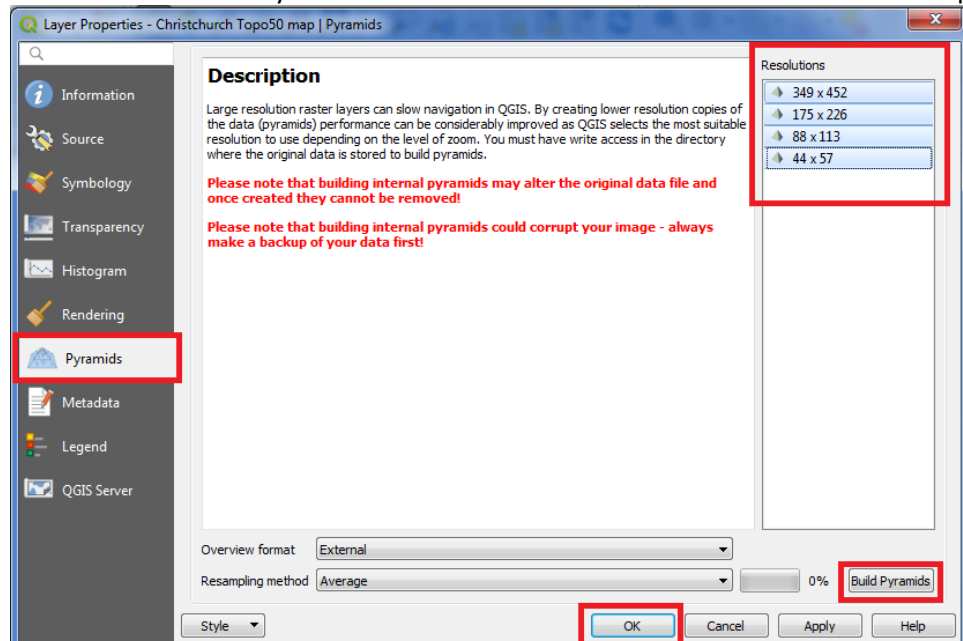


Digitizing Map Data [Write steps and insert Screenshot]

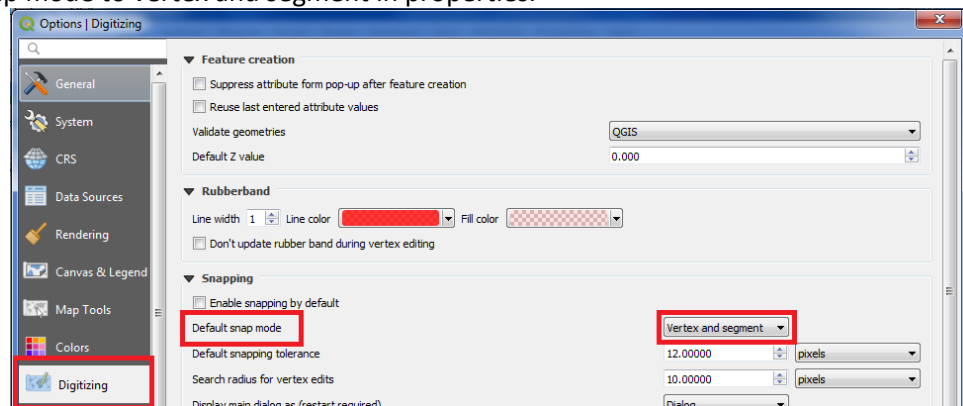
Go to Layer ► Add Raster→ Select “Christchurch Topo50 map.tif” from project Folder



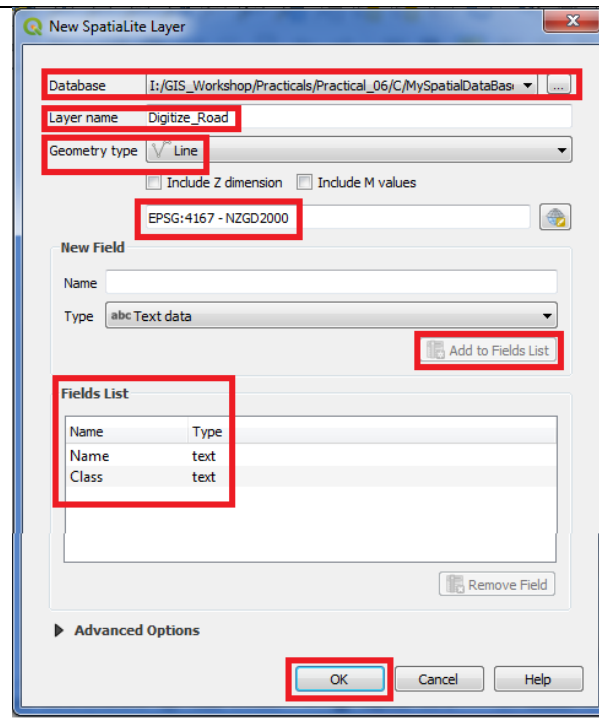
Choose the Pyramids tab. Hold the Ctrl key and select all the resolutions offered in the Resolutions panel.



Set the Default snap mode to vertex and segment in properties.



Go to Layer → Add Layer → Add Spatialite Layer.



Draw Road.

Again, create new layer and draw garden.

Output -

