CE-712: Digital Image Processing of Remotely Sensed Data

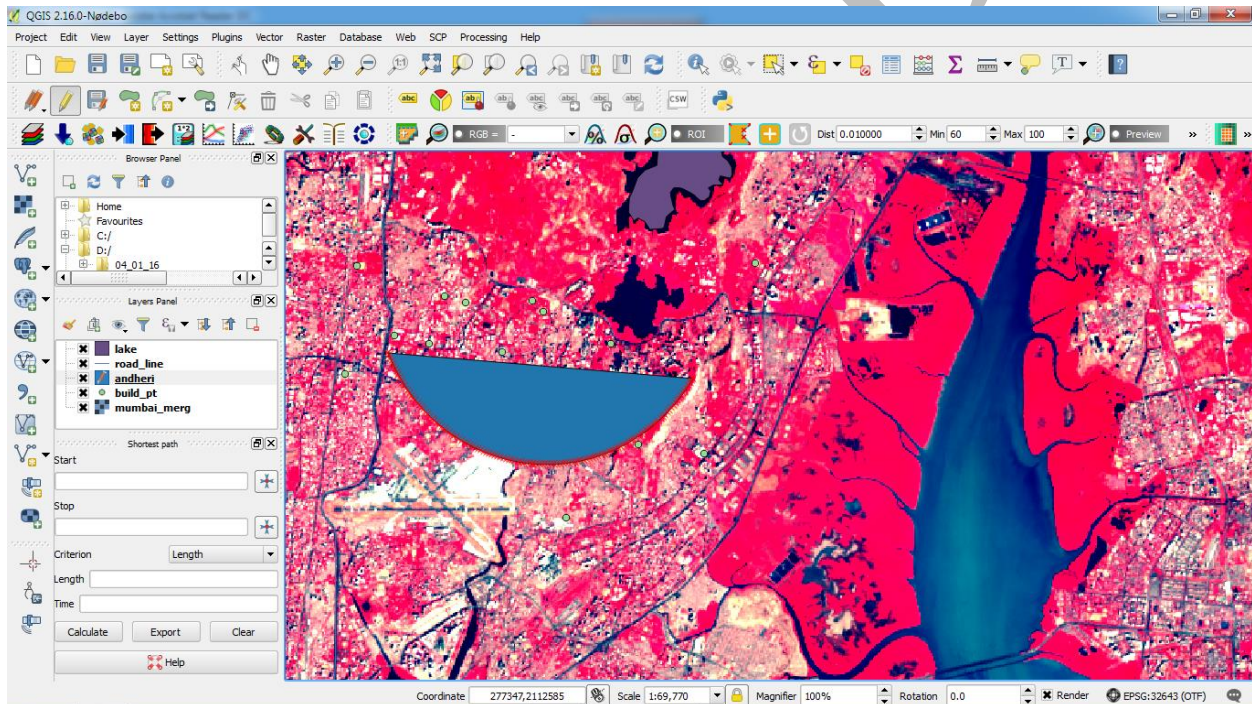## Tutorial Exercise 11

PART -II

To perform basic geoprocessing on the Digitized features.

One of the most important advantage of using GIS is its spatial analytical ability. To demonstrate this we will try to extract point features lying within a polygon feature.
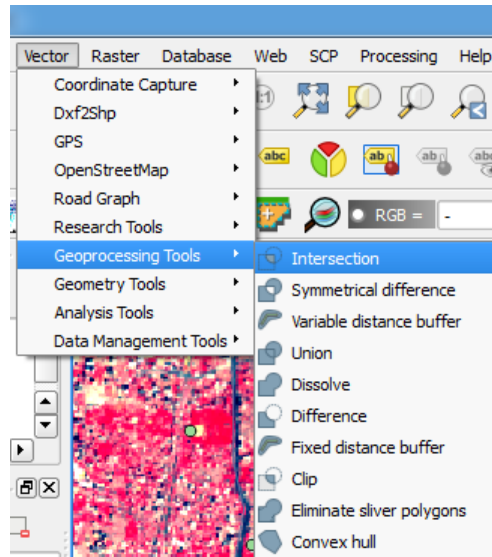
- First step is to create a new polygon layer (follow the steps in Part-I)
- The polygon should be created in such a way that it should contain some points created in Part-I.

Example of created Polygon

In order to extract the number of points lying inside this polygon we will use **Intersection** function of QGIS

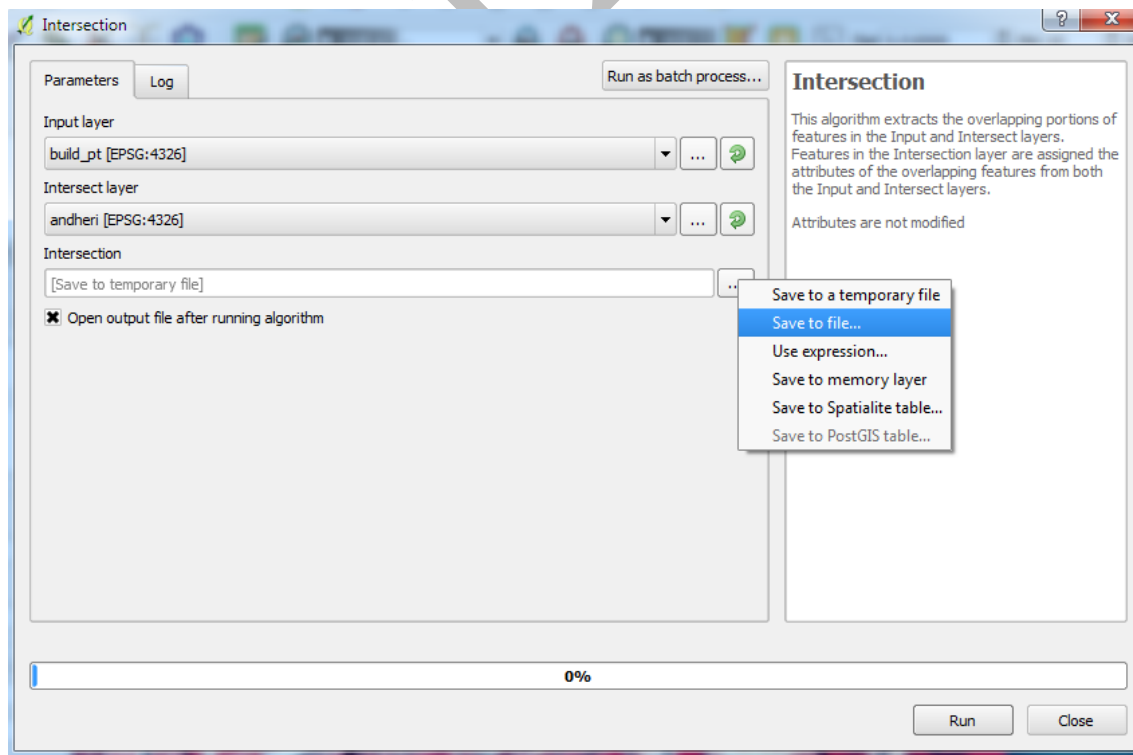For this go to: **Vector >> Geoprocessing Tools >> Intersection**
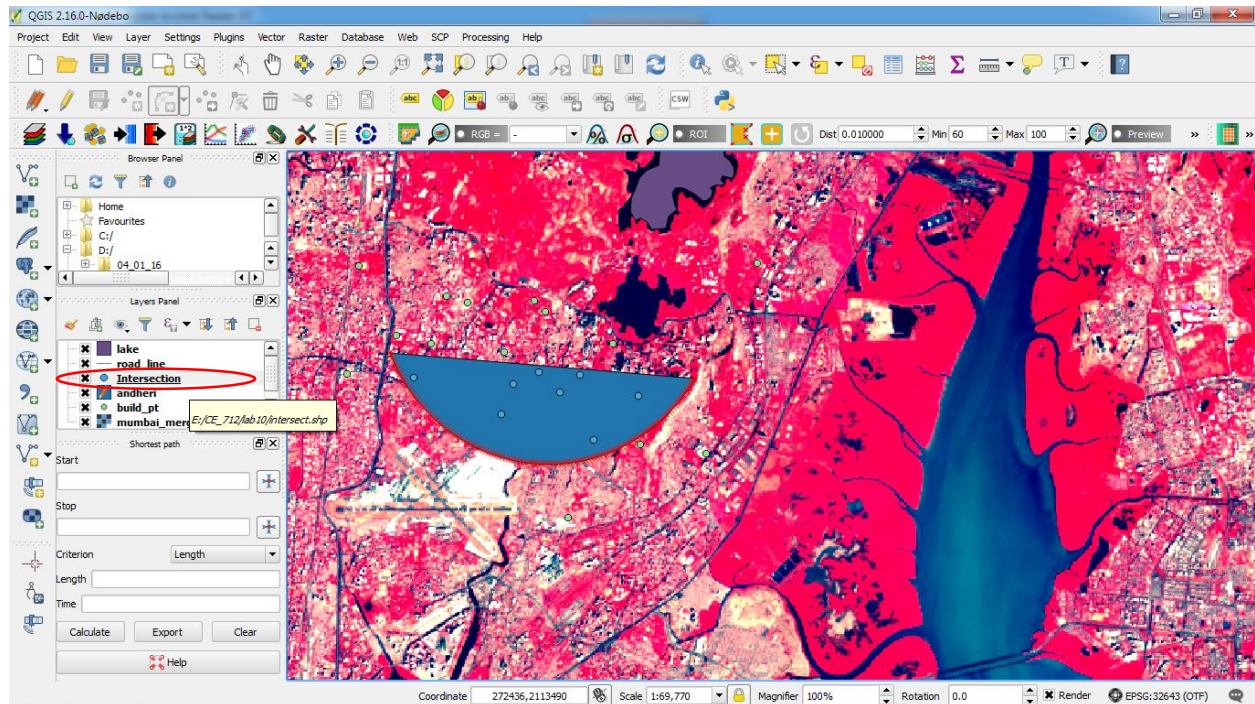
Then add the following details

Input Layer: the name of the Point layer (created in Part-I)

Intersection Layer: the name of newly created polygon layer

Remember to select the option Save to file before clicking on Run

Once the process is completed, we get a new layer which contains the points lying within the newly created polygon layer as shown below
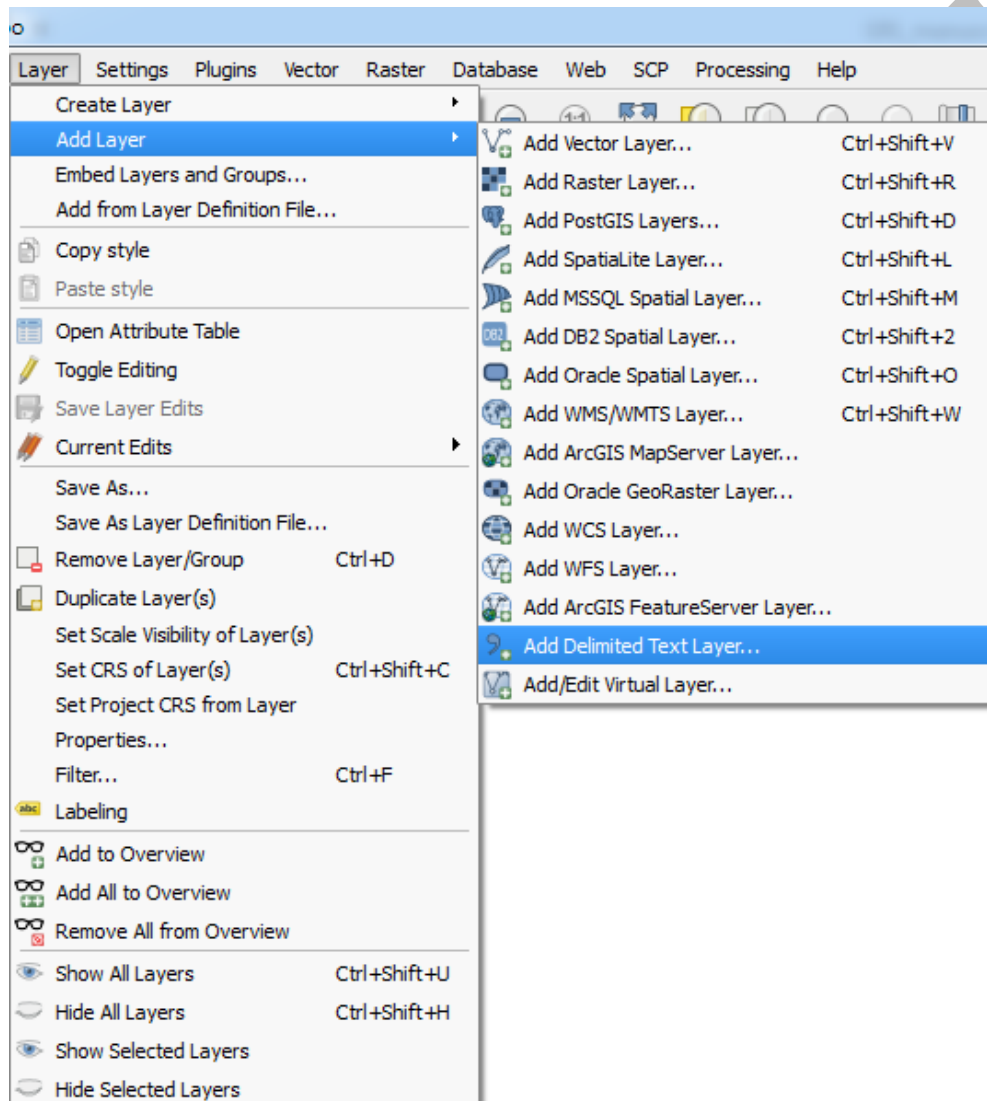

Q1. Extract building points around Powai and Andheri (Locate approximately).

PART –III

To Import delimited text files containing spatial data into QGIS
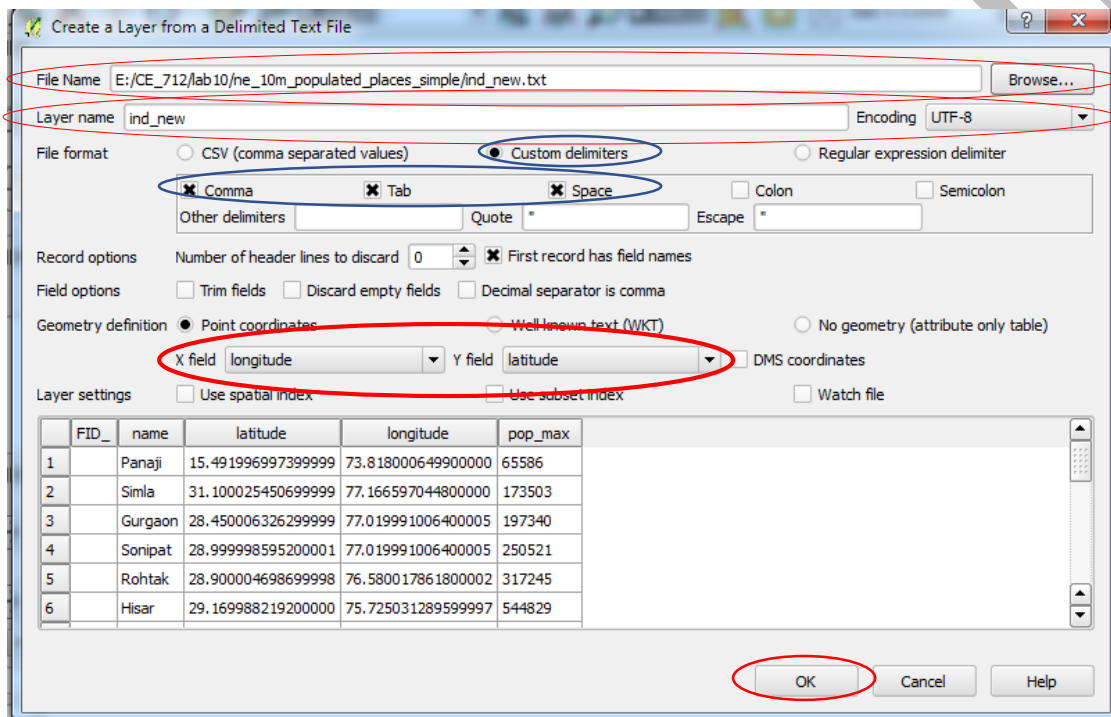
To import text file for population data of India.

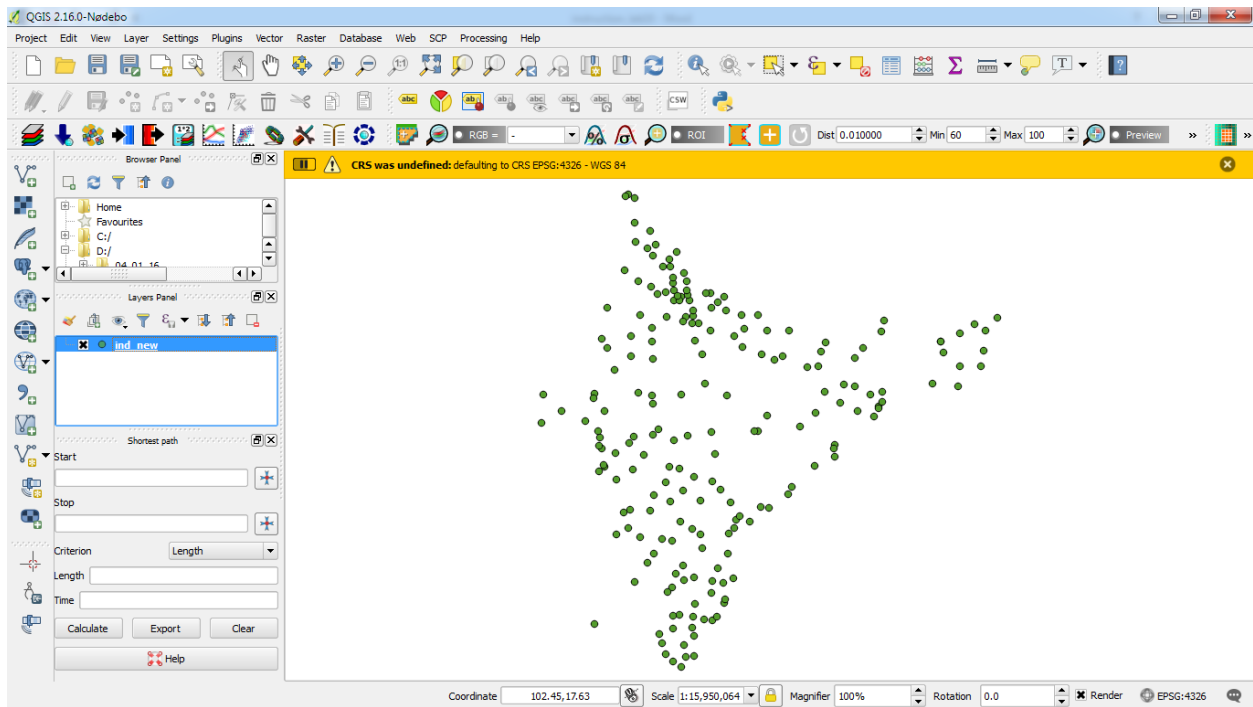Go to: **Layer >> Add Layer >> Add Delimited Text Layer**

In create a layer from delimited text file perform the following text

1) **File Name : Browse to the path where you have saved the provided text file**
2) **Layer Name : Provide any name**
3) **File Format : Should be "Custom delimiters"**
4) **Remember to click on the options Comma, Tab and Space**
5) **Cross check that X field is selected as longitude and Y field as latitude**
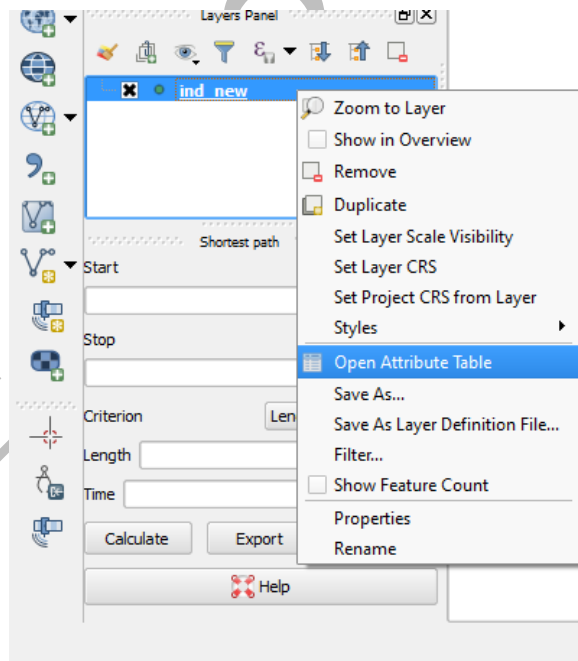

After completing the above steps click on OK

The point layers can be visualized in the QGIS as shown below

To check the attribute table of the layer right click on imported layer in Layers Panel. Then select **Open Attribute Table**

Q2. Using the provided populated places data from Natural earth (www.naturalearthdata.com) extract populated places for your home state (Clue: PART-II of this tutorial)

This manual was prepared using QGIS 2.16