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Section: (C)

Subject: GIS Mini Report

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Assignment / Final Paper

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# Summary

This report include how I picked out data of my village and then how I geo-referenced it with respect to Global Co-ordinate system. For this purpose, I have used “Google Earth” and “QGIS Software”. In this project, I have shown different types of buildings and land classification according to its use.

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## Introduction:

KARAK is the district of Khyber Pakhtunkhwa which is 123 km from Peshawar on the main Indus Highway between Peshawar and Karachi. KARAK is established as a separate district July 1, 1982.

The district of KARAK is administratively sub-divided into three Tehsils.

- (1) Banda Daud Shah.
- (2) Karak.
- (3) Takht-e-Nasrati.

There are total 21 Union Councils in district Karak.

The most important thing, the co-ordinate of my Area is *33,7,12N, 71,5,41E*.

## Nature of the Work:

First, I opened the Google Earth Software and gave “Dabb Sangini” in search menu. It gave me out the satellite imagery of my Area of 2/2/2016, as it’s not so late because it is an urban area and does not suffer changes during this period.

## Searching on the Google Earth:

First, I searched the area and find out co-ordinates od some distinct points and then list them up like:

Locality	x-axes	y-axes
School corner	71.226719	33.134431
House corner	71.227167	33.133931
House corner	71.225723	33.134510
House corner	71.227838	33.134374
House corner	71.226913	33.133360

## Taking the picture:

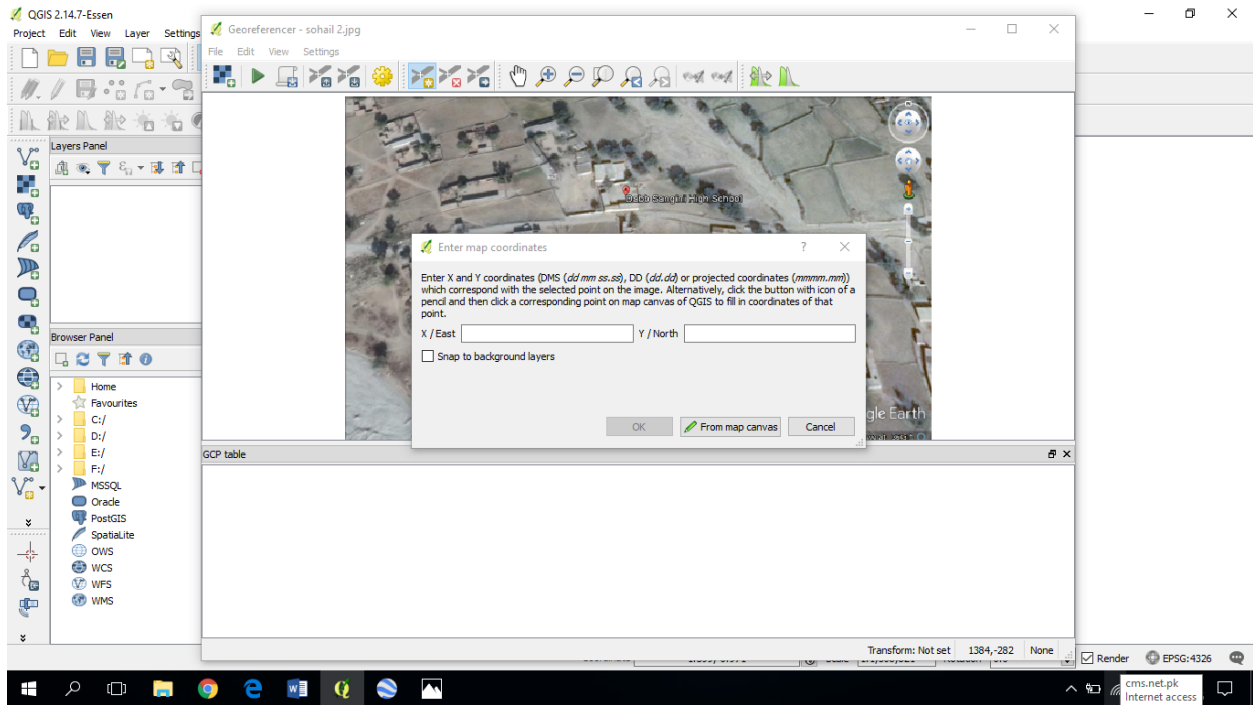
Then I go to the file menu and pick out the snap of area like:



### QGIS software:

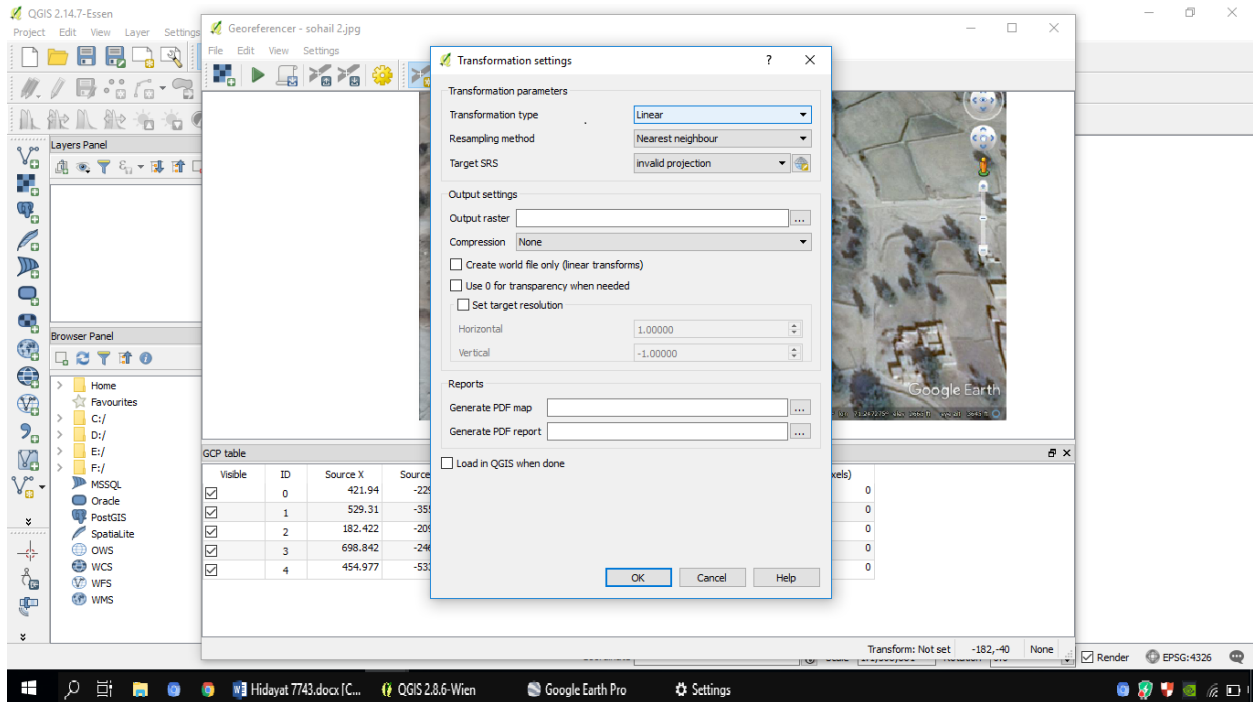
Then I moved to QGIS software and I started to Geo-referenced it. For this first I open the software and check that whether the “geo-referencing” plugin is installed or not. It

was installed by default in my software. I open the georeferencer and added up my data into it and start giving the co-ordinate like:



## Start Geo-Referencing:

After giving the points to the specified locality I started the geo-referencing the raster data from the start button. After pressing that button, it asked about the transformation type which I set up as “Linear:” like:





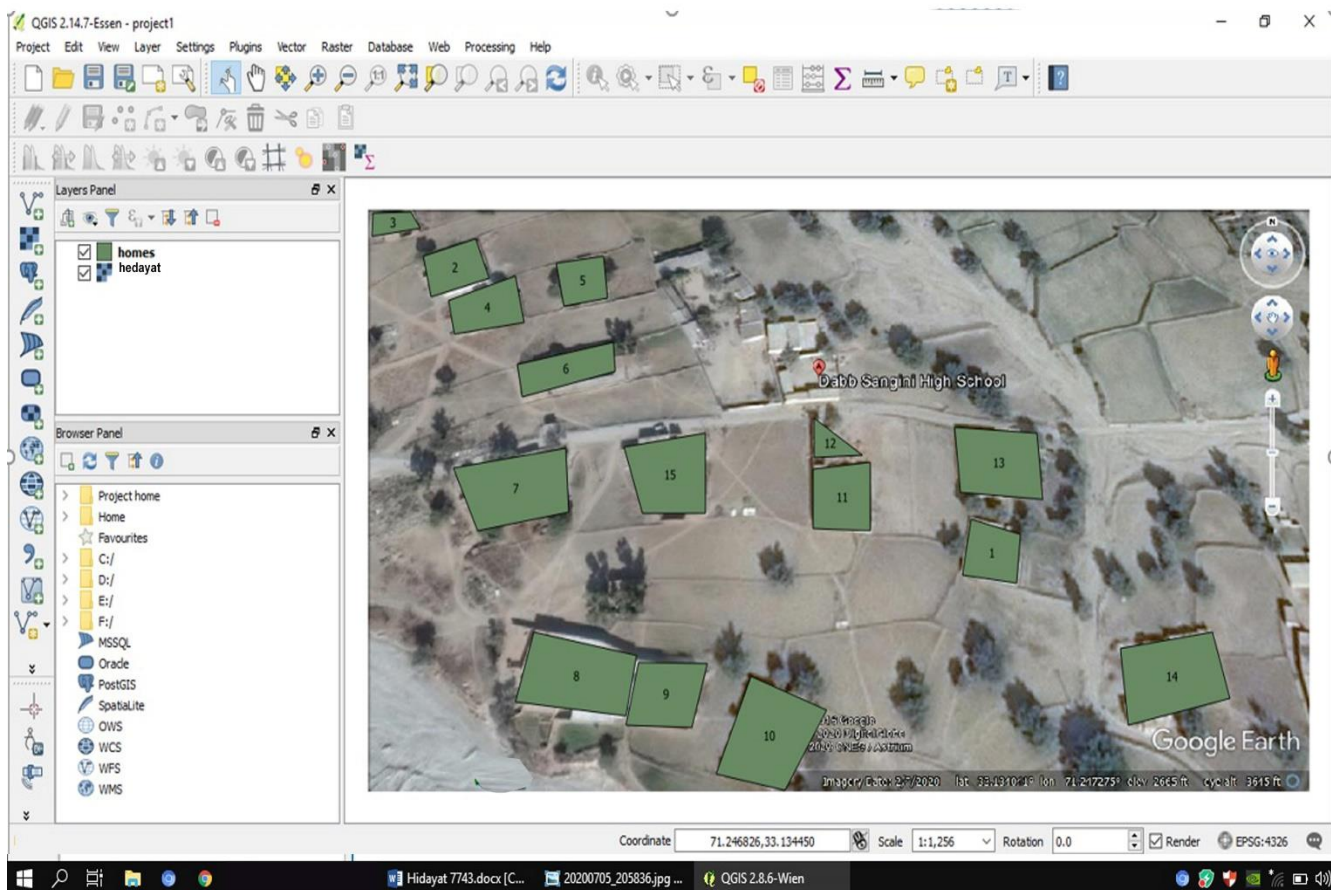
## Working in the main Software:

### Creating shape file:

#### (a) For Homes:

After starting the main software, I created the shape file for the polygon and named it as “Homes”. After that I start making the polygons over the houses and I started from my own house as mentioned in the below diagram. In the same way, I draw many polygons for different houses in my village and then I open the “attribute table” and include the features as:

- (1) The owner’s names.
- (2) Number of the residents.



### (b) For open lands:

Secondly I made another shape file using the same method as for the home shape file. In this shape file I made polygons over the open lands. And then again in the attribute table I included the features like:

- (1) Grassy land.
- (2) Fertility.
- (3) Lawn etc.

### (c) For the Masjid:

Then I made another shape file named as “Masjid”. In this layer, I made polygon over the one Masjid in our area and then show it in attribute table.

- (1) Name of the Masjid.
- (2) Number of Worshippers.

### (d) For point Features:

While adding this layer, I choose point option in the table shown while creating layer. In this layer, I added the features like:

- (1) Tower.
- (2) Trees.

### (e) For Roads and streets:

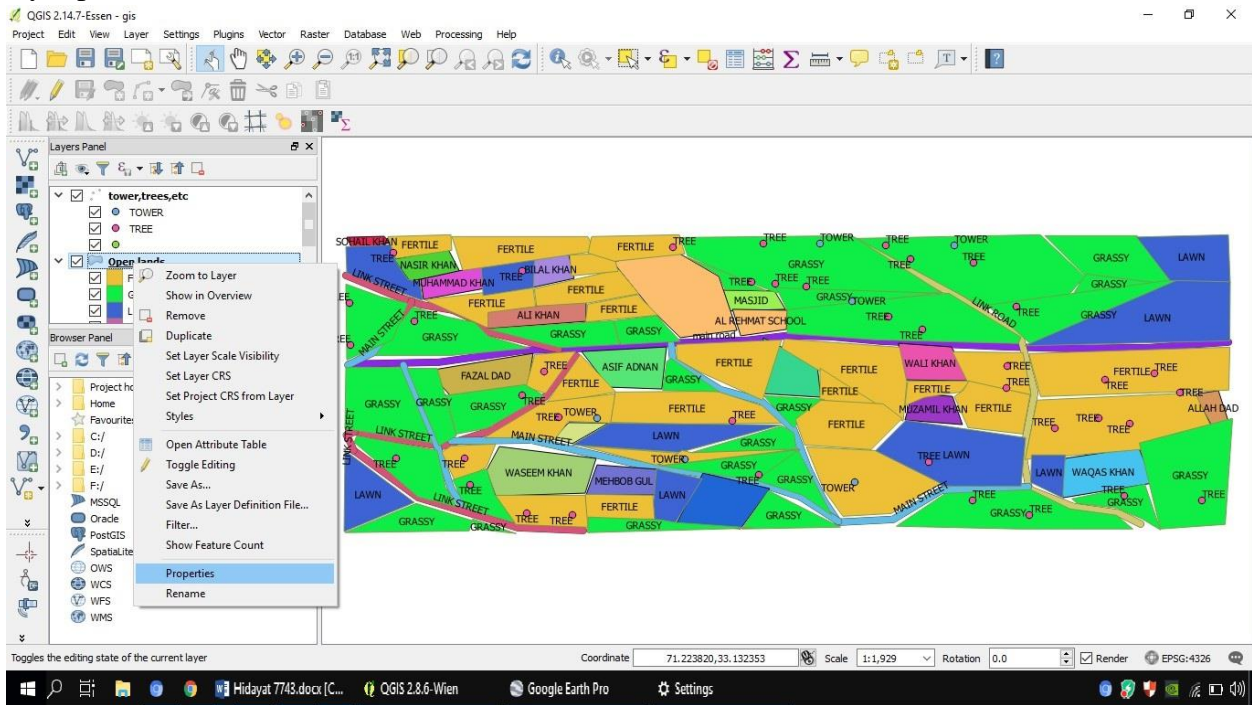
In this layer, I created file as line instead of the point. After that I showed roads and streets in this layer. Later, I categories this layer on the following basis:

- (1) Main Road.
- (2) Link Road.
- (3) Main Street.
- (4) Link Street.

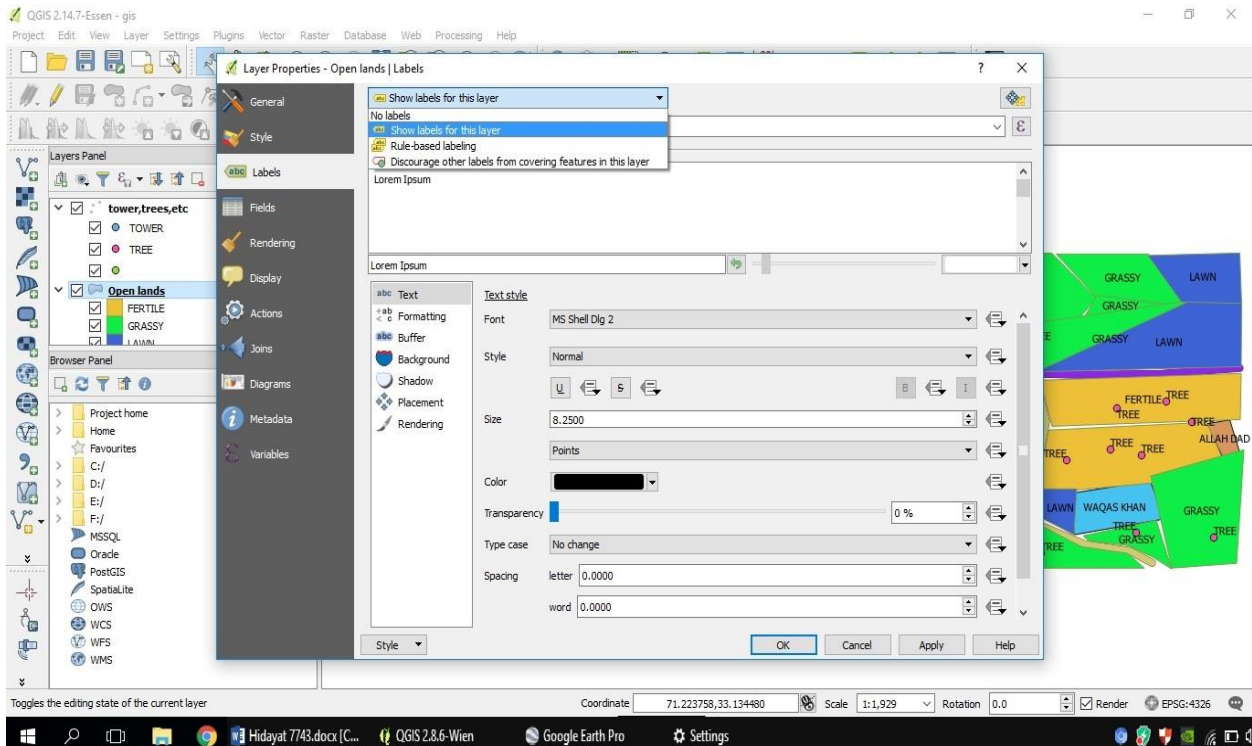


## Labeling and Style:

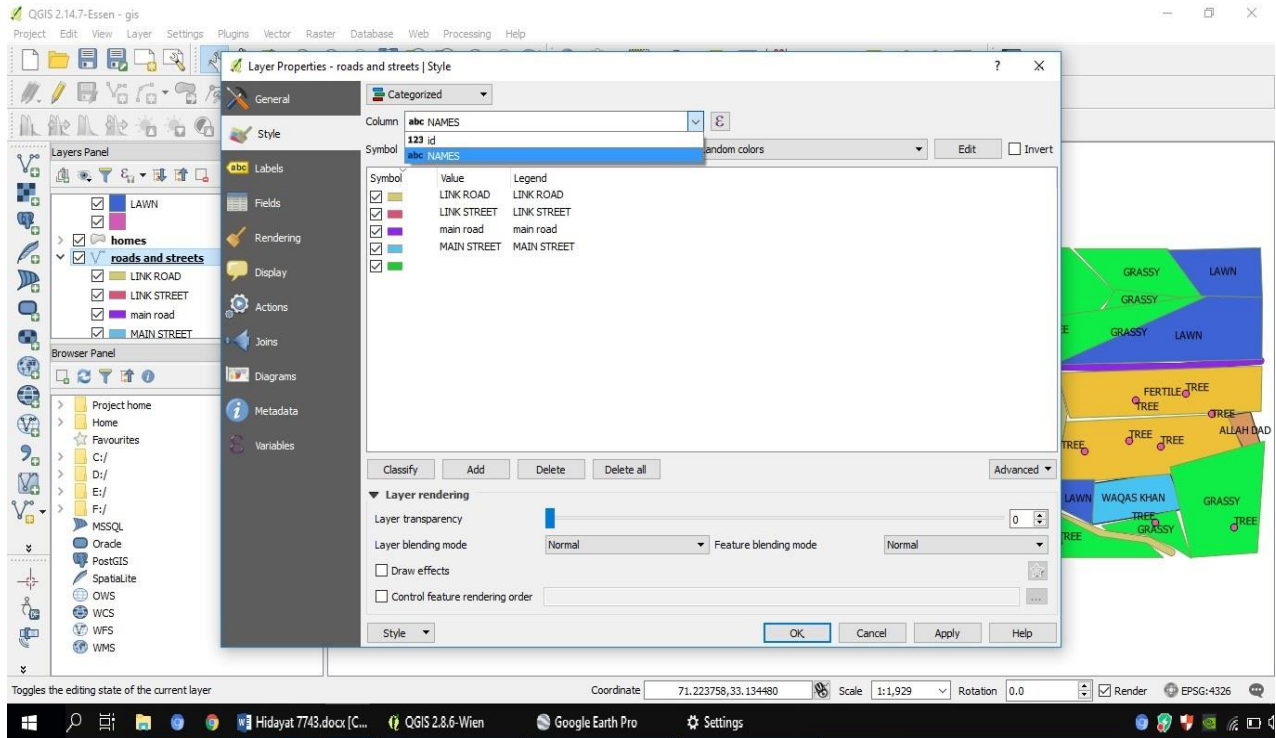
For labeling and style I open “properties” by right clicking on the layer in layer panel. Like:



After that it open the window of labeling and style, in that I labeled it first as:

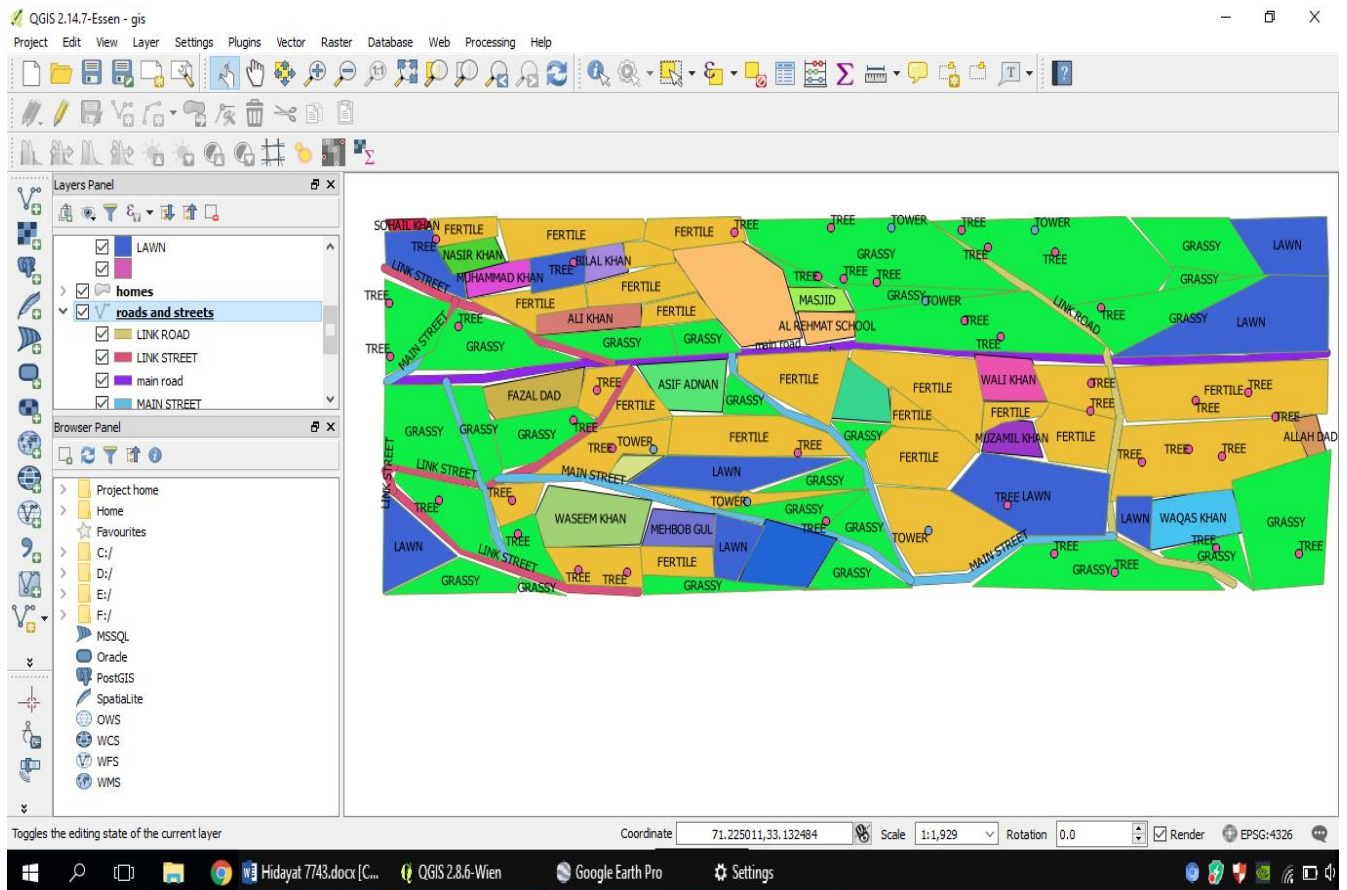


This is done with the labeling and then I style menu I categories the layer according to road type:



## Final Result:

Final output of my whole process is below:



Now you can see the co-ordinates are same as Google Earth is showing.

That mean my project is complete.

QGIS 2.14.7-Essen - gis

Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help

The image displays the QGIS 2.14.7-Essen interface. The main window shows a land use map with various colored polygons and labels. The map is divided into several areas, each labeled with a land use type: 'FERTILE' (orange), 'GRASSY' (green), 'LAWN' (blue), and 'TREE' (yellow). The map also shows a network of roads, including 'LINK STREET', 'MAIN STREET', and 'LINK ROAD'. Other labels include 'SCHAIKHAN', 'NASIR KHAN', 'MUHAMMAD KHAN', 'BALAL KHAN', 'ALI KHAN', 'AL REHMAT SCHOOL', 'MASJID', 'GRASSY TOWER', 'WALI KHAN', 'MUZAMIL KHAN', 'ALLAH DAD', 'FAZAL DAD', 'ASIF ADNAN', 'WASEEM KHAN', 'MEHBOB GUL', and 'WAQAS KHAN'. The interface includes a Layers Panel on the left, a Browser Panel, and a status bar at the bottom. The status bar shows the coordinate '71.225011, 33.132484', a scale of '1:1,929', and a rotation of '0.0'. The system tray at the bottom right shows the time '9:40 PM' and the date '10/23/2016'.

Layers Panel

- LAWN
- homes
- roads and streets
  - LINK ROAD
  - LINK STREET
  - main road
  - MAIN STREET

Browser Panel

- Project home
- Home
- Favourites
- C:/
- D:/
- E:/
- F:/
- MSSQL
- Oracle
- PostGIS
- SpaLite
- OWS
- WCS
- WFS
- WMS

Coordinate: 71.225011, 33.132484 Scale: 1:1,929 Rotation: 0.0 Render EPSG:4326

9:40 PM 10/23/2016

The End