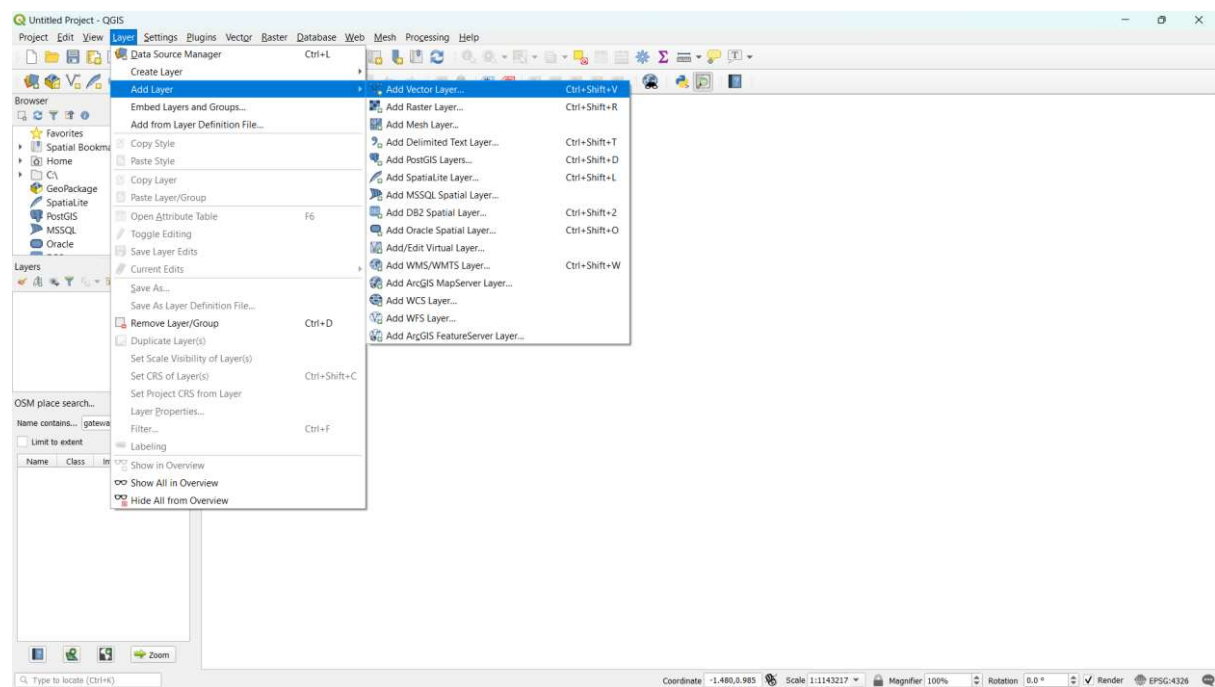


PRACTICAL – 4

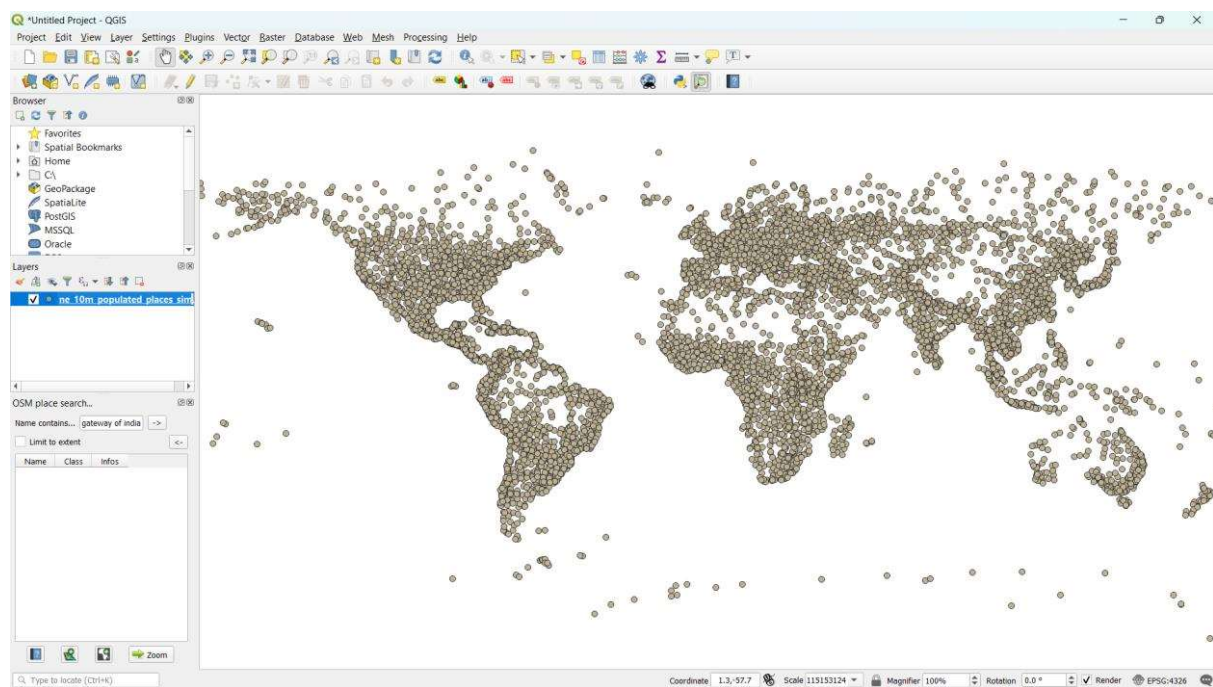
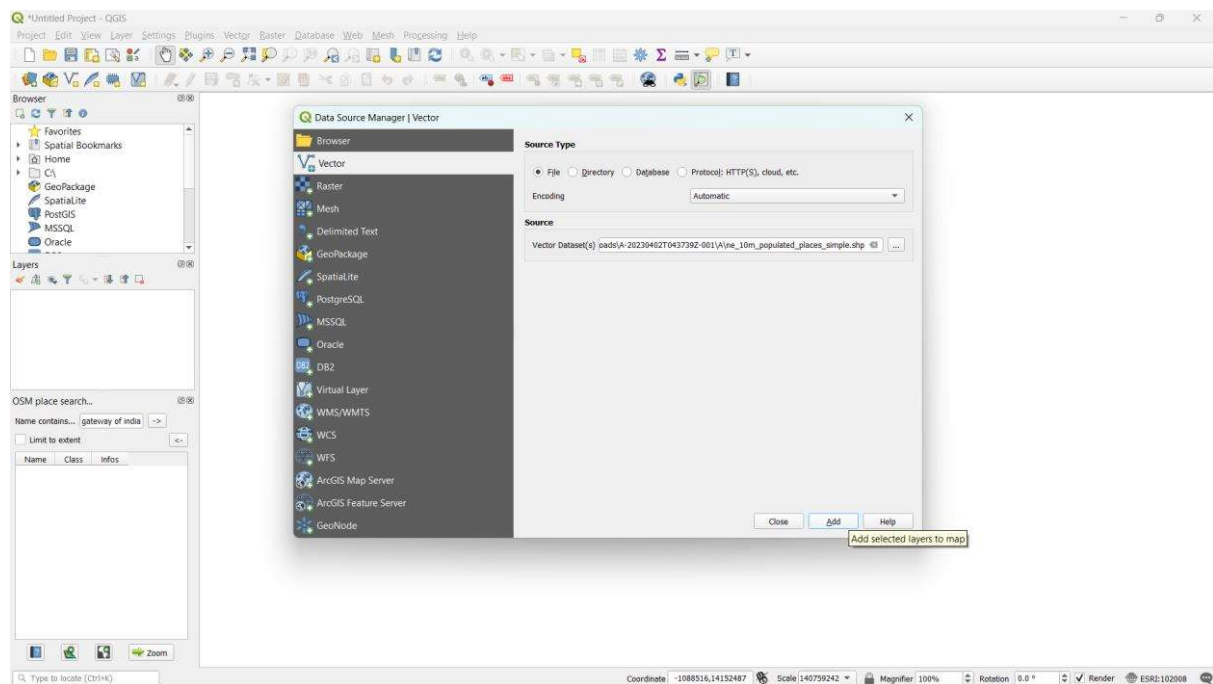
Aim: Working with attributes, terrain Data.

Steps:

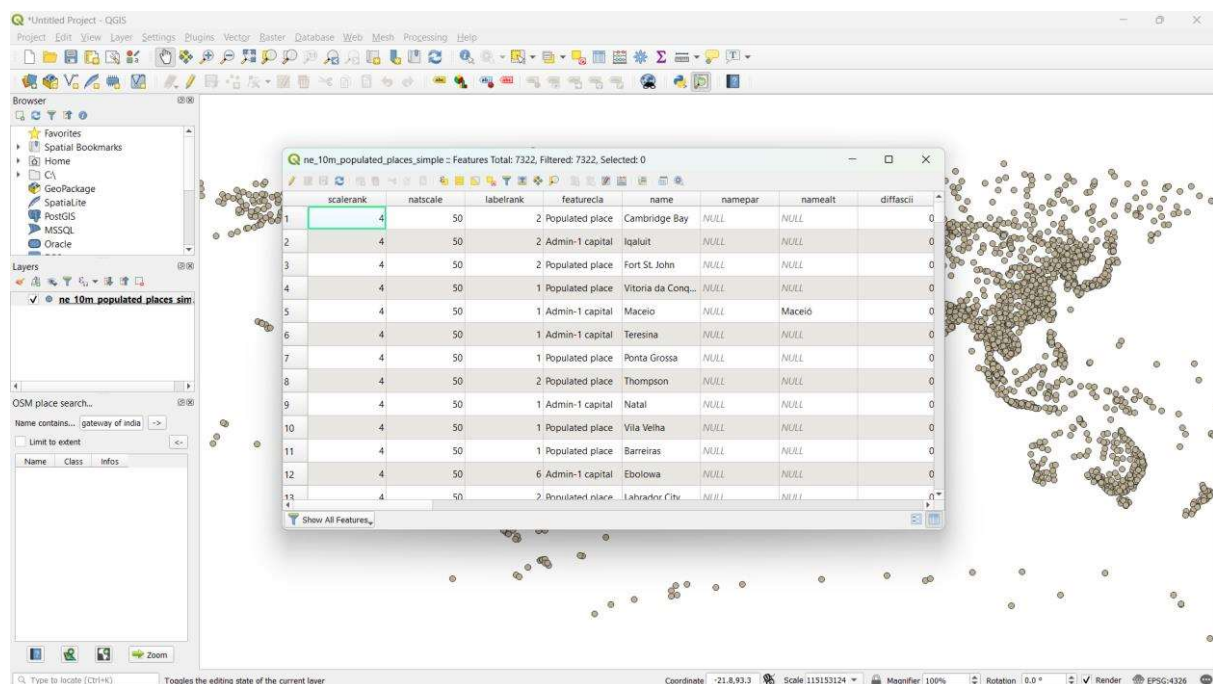
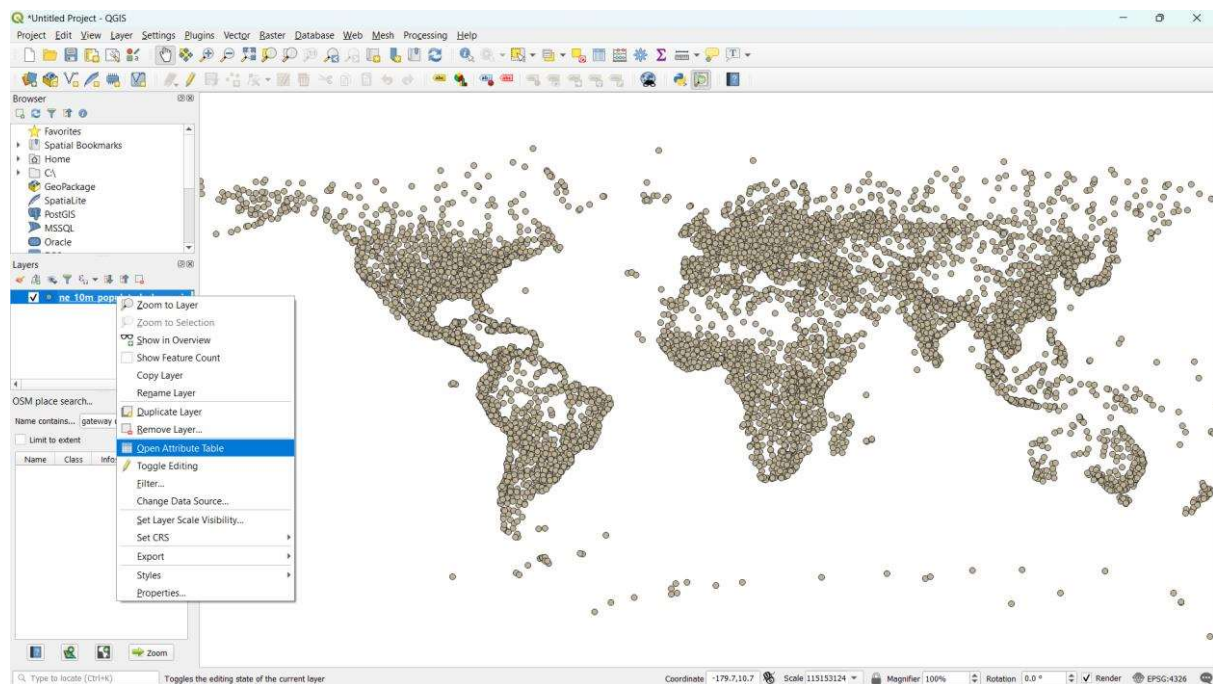
Step 1 – Open QGIS Desktop and create a new project. Layer > Add Layer > Add Vector Layer.



Step 2 – Select the following file and click add.



Step 3 – Right click on the layer and open Attribute Table.



Name: Sheldon Dias

Roll No: IT20010

Subject: Principles of Geographical Information System Practical

Subject Code: USIT6P4

Step 4 – Click the select features using expression tool and enter the following expression then click select features.

ne_10m_populated_places_simple : Features Total: 7322, Filtered: 7322, Selected: 0

scale	rank	natscale	labelrank	featurecla	name	namepar	namealt	diffascii	nameascii	adm0cap	capit	capin	worldcty	megacyt	sovname
1	4	50	2	Populated place	Cambridge Bay	NULL	NULL	0	Cambridge Bay	0	0	NULL	0	0	Canada
2	4	50	2	Admin-1 capital	Iqaluit	NULL	NULL	0	Iqaluit	0	0	NULL	0	0	Canada
3	4	50	2	Populated place	Fort St. John	NULL	NULL	0	Fort St. John	0	0	NULL	0	0	Canada
4	4	50	1	Populated place	Vitoria da Conq...	NULL	NULL	0	Vitoria da Conq...	0	0	NULL	0	0	Brazil
5	4	50	1	Admin-1 capital						0	NULL		0	1	Brazil
6	4	50	1	Admin-1 capital						0	NULL		0	1	Brazil
7	4	50	1	Populated place						0	NULL		0	0	Brazil
8	4	50	2	Populated place						0	NULL		0	0	Canada
9	4	50	1	Admin-1 capital						0	NULL		0	1	Brazil
10	4	50	1	Populated place						0	NULL		0	0	Brazil
11	4	50	1	Populated place						0	NULL		0	0	Brazil
12	4	50	6	Admin-1 capital						0	NULL		0	0	Cameroon
13	4	50	2	Populated place						0	NULL		0	0	Canada
14	4	50	2	Populated place						0	NULL		0	0	Canada
15	4	50	2	Populated place						0	NULL		0	0	Canada
16	4	50	3	Admin-1 capital						0	NULL		0	0	Argentina
17	4	50	3	Populated place						0	NULL		0	0	Argentina
18	4	50	3	Admin-1 region						0	NULL		0	0	Italy
19	4	50	7	Admin-1 capital						0	NULL		0	0	Central African
20	4	50	2	Populated place						0	NULL		0	0	Canada
21	4	50	2	Populated place	Taloyoak	NULL	NULL	0	Taloyoak	0	0	NULL	0	0	Canada
22	4	50	2	Populated place	Anviat	NULL	NULL	0	Anviat	0	0	NULL	0	0	Canada
23	4	50	2	Populated place	Chesterfield Inlet	NULL	NULL	0	Chesterfield Inlet	0	0	NULL	0	0	Canada
24	4	50	2	Populated place	Kuujuarapik	NULL	NULL	0	Kuujuarapik	0	0	NULL	0	0	Canada
25	4	50	2	Populated place	North Bay	NULL	NULL	0	North Bay	0	0	NULL	0	0	Canada
26	4	50	2	Populated place	Timmins	NULL	NULL	0	Timmins	0	0	NULL	0	0	Canada

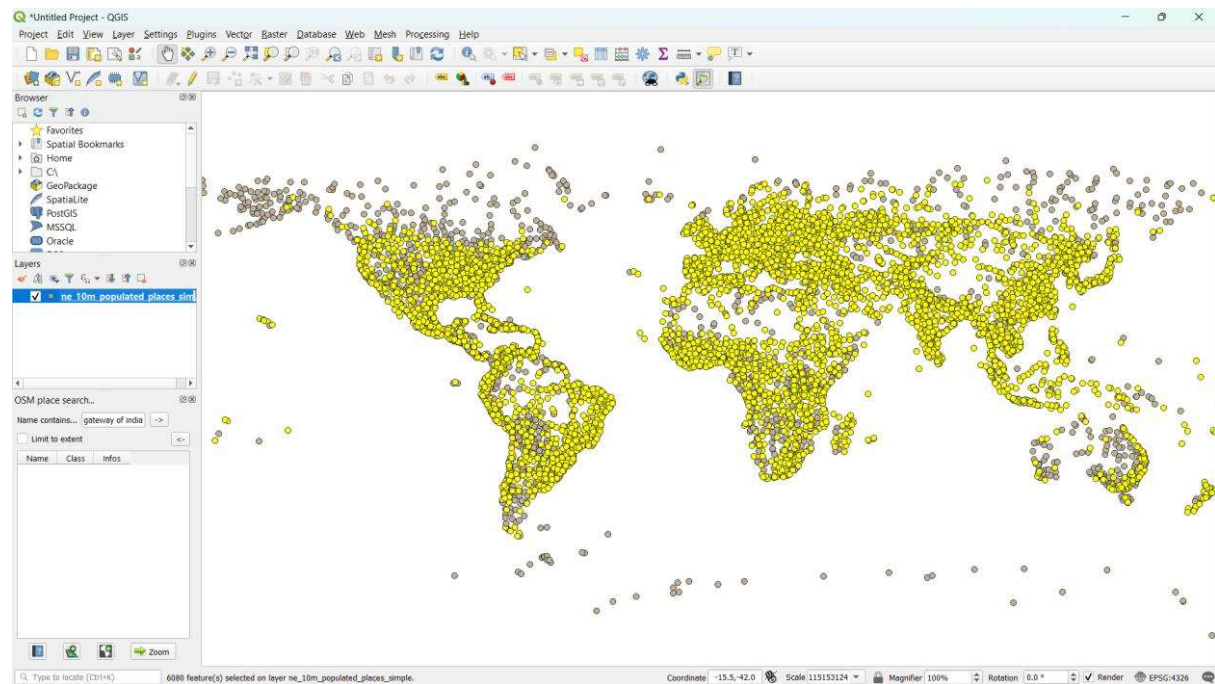
Expression: pop_max > 10000

Output preview: 1

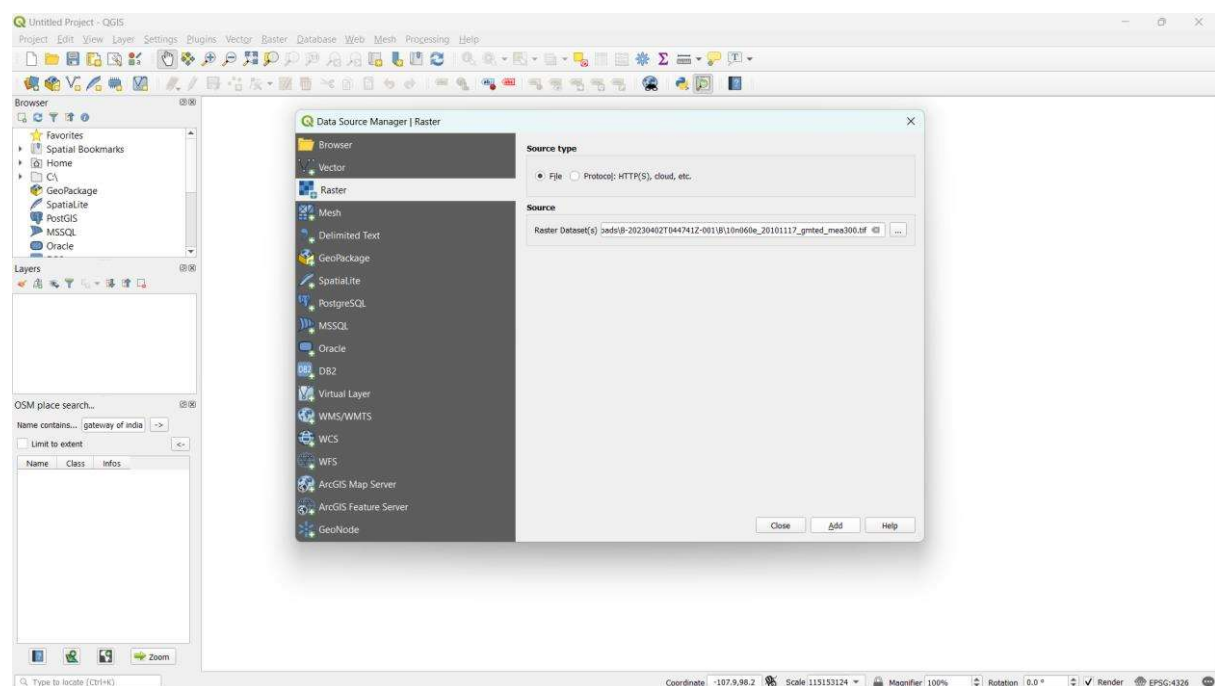
Select Features

ne_10m_populated_places_simple : Features Total: 7322, Filtered: 7322, Selected: 6080

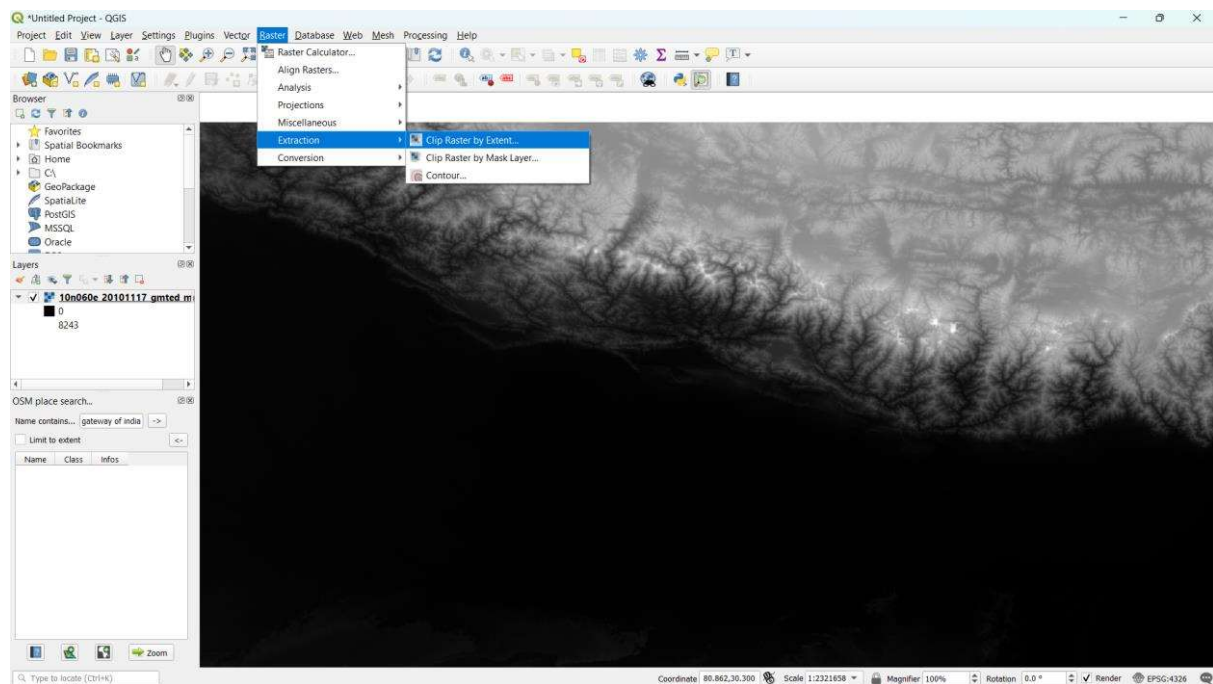
scale	rank	natscale	labelrank	featurecla	name	namepar	namealt	diffascii	nameascii	adm0cap	capit	capin	worldcty	megacyt	sovname
1	4	50	2	Populated place	Cambridge Bay	NULL	NULL	0	Cambridge Bay	0	0	NULL	0	0	Canada
2	4	50	2	Admin-1 capital	Iqaluit	NULL	NULL	0	Iqaluit	0	0	NULL	0	0	Canada
3	4	50	2	Populated place	Fort St. John	NULL	NULL	0	Fort St. John	0	0	NULL	0	0	Canada
4	4	50	1	Populated place	Vitoria da Conq...	NULL	NULL	0	Vitoria da Conq...	0	0	NULL	0	0	Brazil
5	4	50	1	Admin-1 capital	Maceio	NULL	NULL	0	Maceio	0	0	NULL	0	1	Brazil
6	4	50	1	Admin-1 capital	Teresina	NULL	NULL	0	Teresina	0	0	NULL	0	1	Brazil
7	4	50	1	Populated place	Ponta Grossa	NULL	NULL	0	Ponta Grossa	0	0	NULL	0	0	Brazil
8	4	50	2	Populated place	Thompson	NULL	NULL	0	Thompson	0	0	NULL	0	0	Canada
9	4	50	1	Admin-1 capital	Natal	NULL	NULL	0	Natal	0	0	NULL	0	1	Brazil
10	4	50	1	Populated place	Vila Velha	NULL	NULL	0	Vila Velha	0	0	NULL	0	0	Brazil
11	4	50	1	Populated place	Barreiras	NULL	NULL	0	Barreiras	0	0	NULL	0	0	Brazil
12	4	50	6	Admin-1 capital	Ebolowa	NULL	NULL	0	Ebolowa	0	0	NULL	0	0	Cameroon
13	4	50	2	Populated place	Labrador City	NULL	NULL	0	Labrador City	0	0	NULL	0	0	Canada
14	4	50	2	Populated place	Sydney	NULL	NULL	0	Sydney	0	0	NULL	0	0	Canada
15	4	50	2	Populated place	Kuujuuaq	NULL	NULL	0	Kuujuuaq	0	0	NULL	0	0	Canada
16	4	50	3	Admin-1 capital	San Juan	NULL	NULL	0	San Juan	0	0	NULL	0	0	Argentina
17	4	50	3	Populated place	El Calafate	NULL	NULL	0	El Calafate	0	0	NULL	0	0	Argentina
18	4	50	3	Admin-1 region	Venice	NULL	NULL	0	Venice	0	0	NULL	0	0	Italy
19	4	50	7	Admin-1 capital	Bambani	NULL	NULL	0	Bambani	0	0	NULL	0	0	Central African
20	4	50	2	Populated place	Igloolik	NULL	NULL	0	Igloolik	0	0	NULL	0	0	Canada
21	4	50	2	Populated place	Taloyoak	NULL	NULL	0	Taloyoak	0	0	NULL	0	0	Canada
22	4	50	2	Populated place	Anviat	NULL	NULL	0	Anviat	0	0	NULL	0	0	Canada
23	4	50	2	Populated place	Chesterfield Inlet	NULL	NULL	0	Chesterfield Inlet	0	0	NULL	0	0	Canada
24	4	50	2	Populated place	Kuujuarapik	NULL	NULL	0	Kuujuarapik	0	0	NULL	0	0	Canada
25	4	50	2	Populated place	North Bay	NULL	NULL	0	North Bay	0	0	NULL	0	0	Canada
26	4	50	2	Populated place	Timmins	NULL	NULL	0	Timmins	0	0	NULL	0	0	Canada



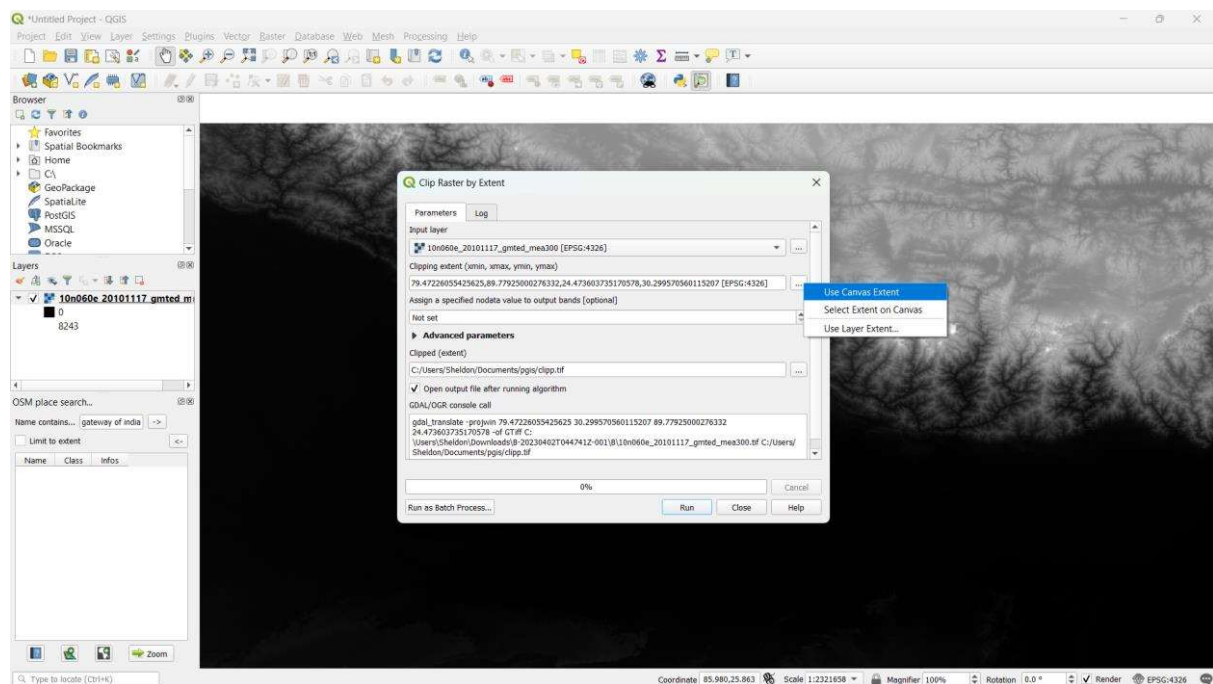
Step 5 – Create a new project and add the following raster layer.



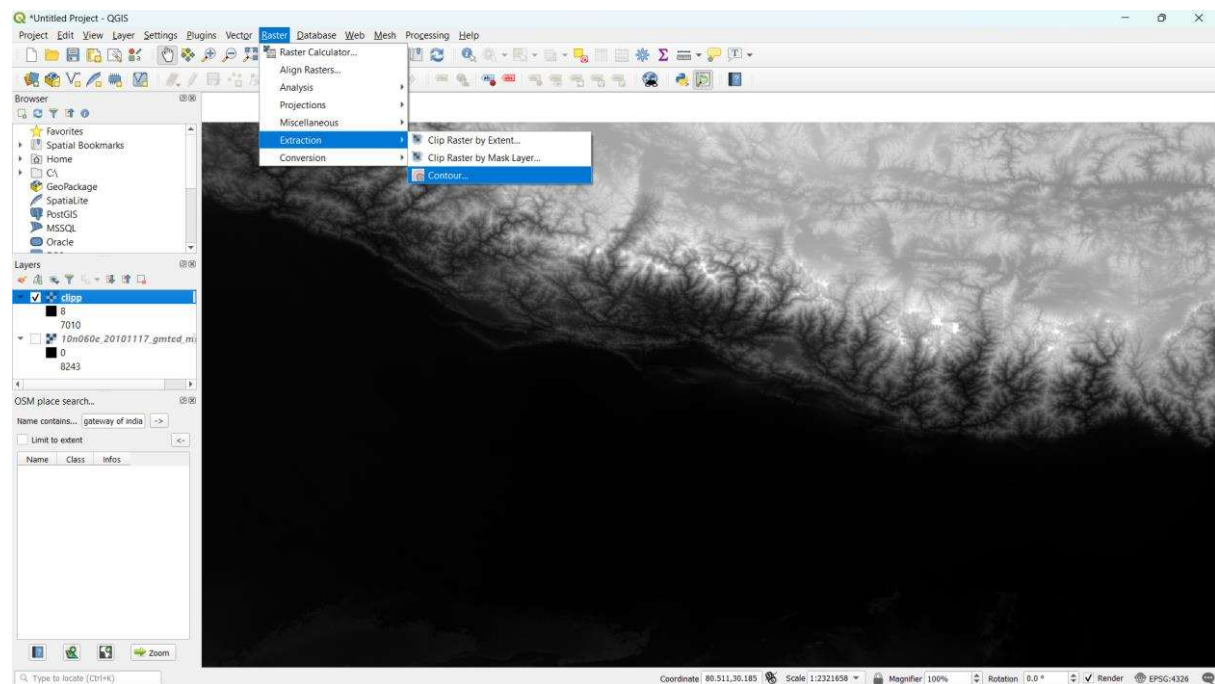
Step 6 – Raster > Extraction > Clip Raster by Extent.



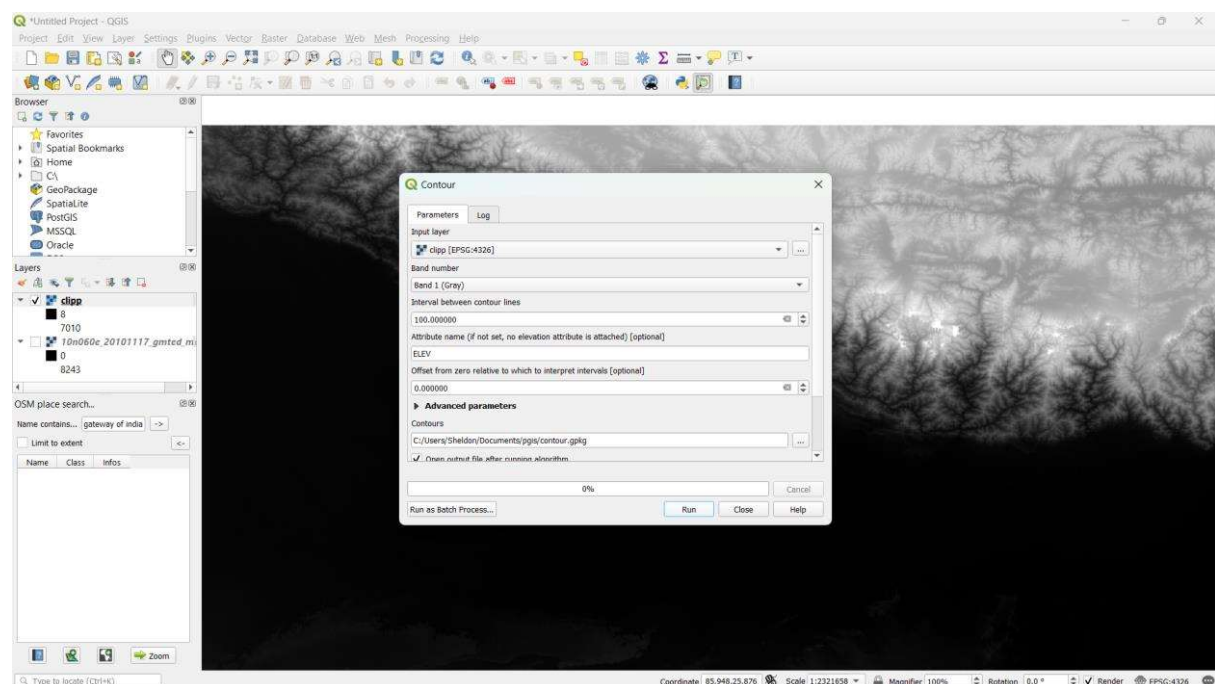
Step 7 – Set the following parameters and hit run.

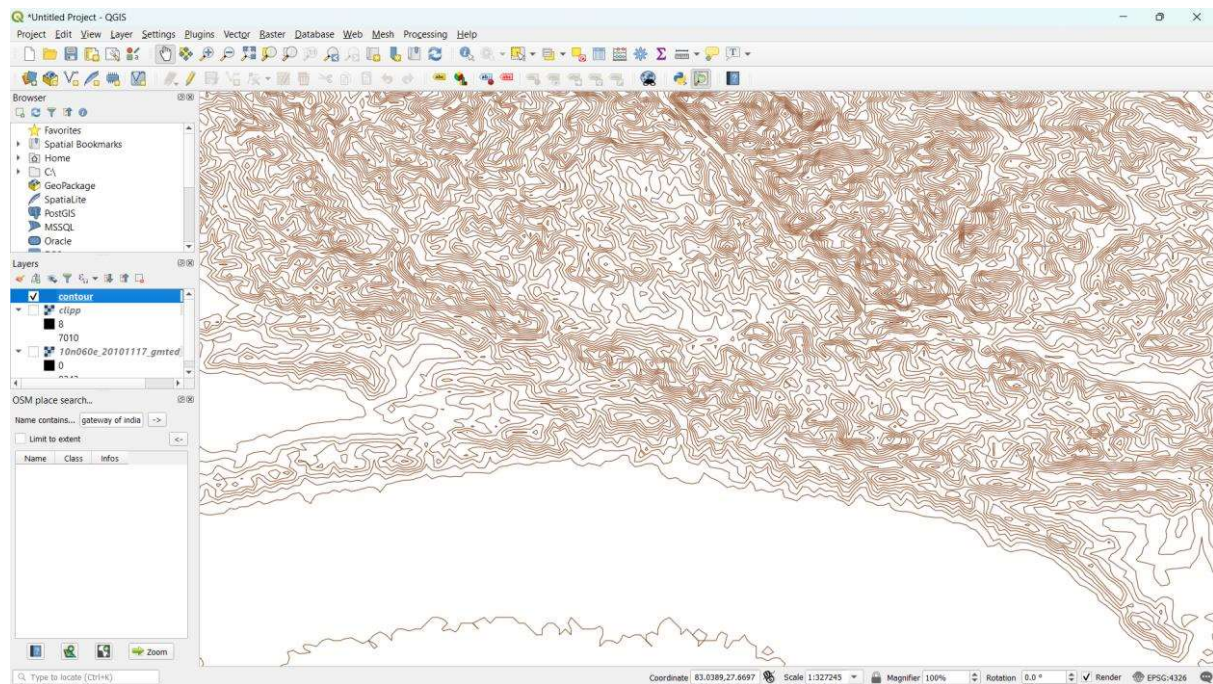


Step 8 – Raster > Extraction > Contour.



Step 9 – Set the following parameters and hit run.

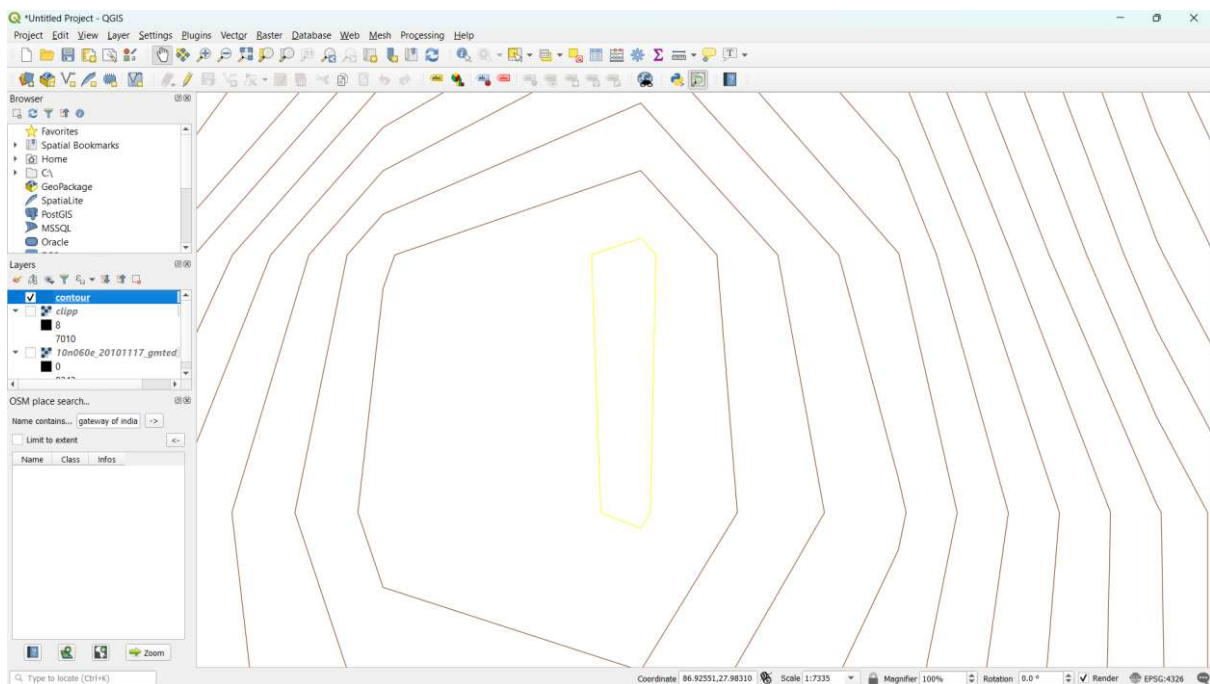




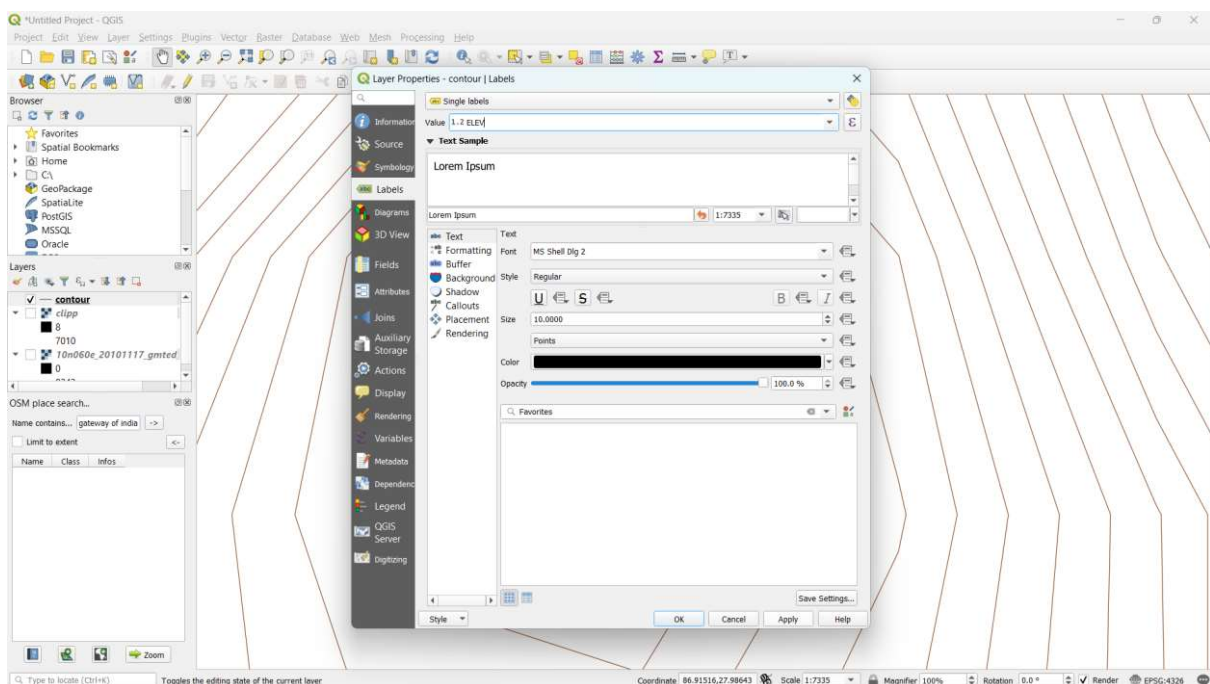
Step 10 – To find the highest point open the attribute table. Sort the elev column in descending order, select the first row and click the zoom map to selected rows tool.

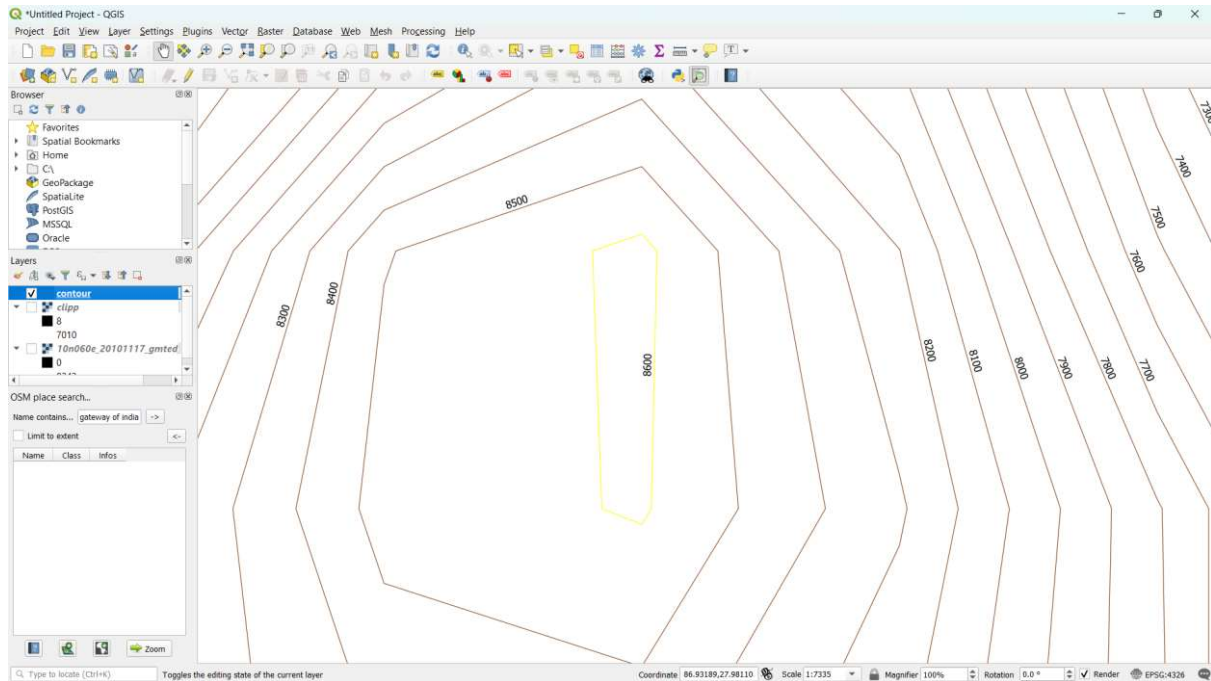
	fid	ID	ELEV
1	14404	14403	8600
2	14493	14492	8500
3	14559	14558	8400
4	15207	15206	8400
5	14558	14557	8300
6	15206	15205	8300
7	14557	14556	8200
8	15205	15204	8200
9	14629	14628	8100
10	15204	15203	8100
11	16501	16500	8100
12	14628	14627	8000
13	15203	15202	8000
14	16543	16542	8000
15	14713	14712	7900
16	15274	15273	7900
17	16542	16541	7900
18	13785	13784	7800
19	14712	14711	7800
20	15273	15272	7800
21	16541	16540	7800
22	10228	10227	7700
23	13784	13783	7700
24	14711	14710	7700
25	15272	15271	7700
26	16540	16539	7700

The point with highest elevation is highlighted.

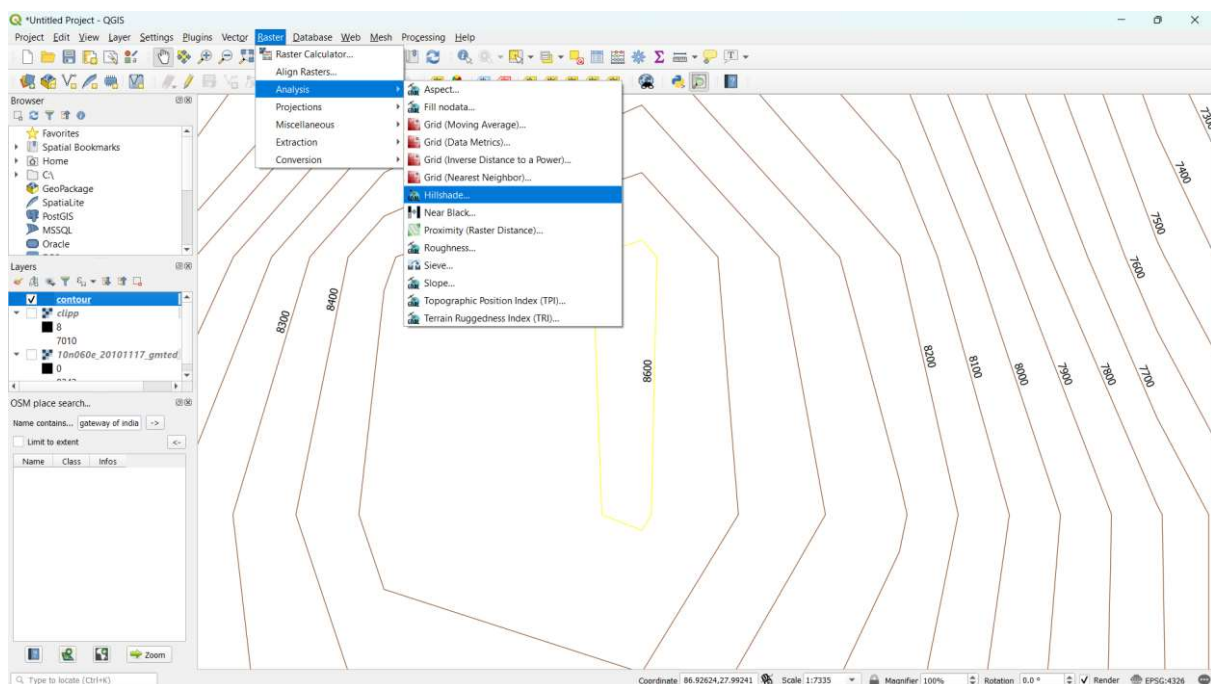


Step 11 – To get labels, open layer properties in that open the layer menu then select the following options and then hit apply.





Step 12 – Raster > Analysis > Hill Shade.



Step 13 – Set the following parameters and hit run.

