

### Practical 3

## Importing Spreadsheets or CSV files and Using Plugins

### Importing Spreadsheets or CSV files

Please download the following version of QGIS.

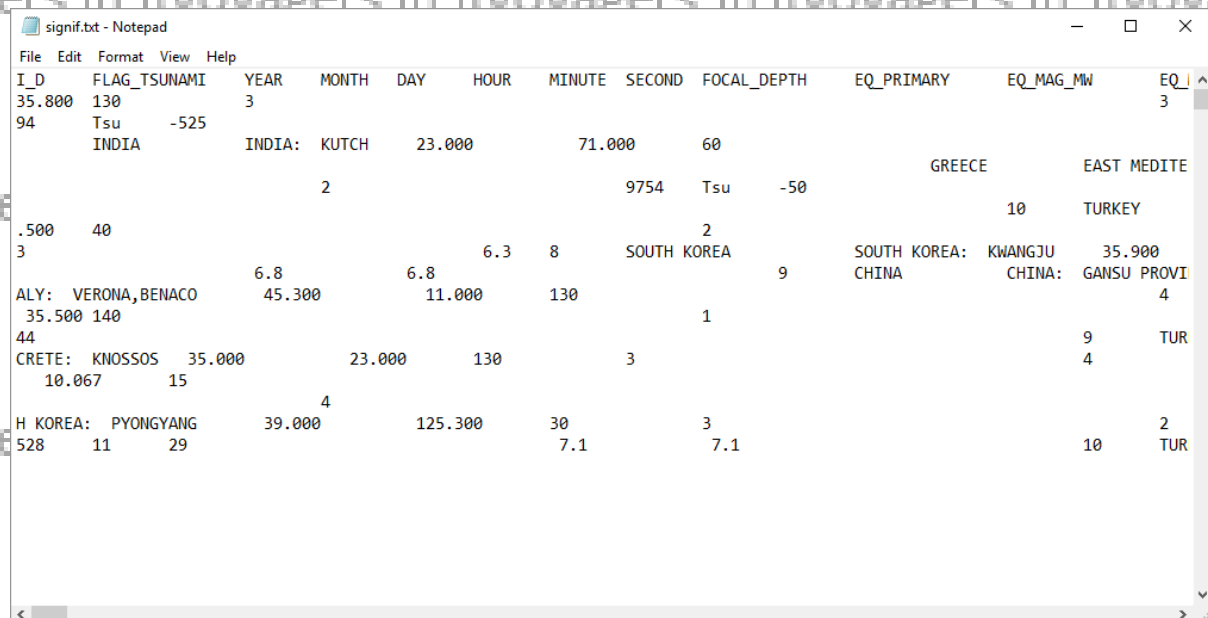
[http://download.osgeo.org/qgis/win64/QGIS-OSGeo4W-2.0.1-Setup-x86\\_64.exe](http://download.osgeo.org/qgis/win64/QGIS-OSGeo4W-2.0.1-Setup-x86_64.exe)

Please download the resources files from the below link.

[https://drive.google.com/open?id=1vcZX0iSqfjC4s\\_MXNnxmissaNKucNQx](https://drive.google.com/open?id=1vcZX0iSqfjC4s_MXNnxmissaNKucNQx)

We can save our GIS data in the form of tabular format like CSV file or structured text format like we are going to use in this practical.

Following file contains the data about earthquake, it has latitude and longitude values for each feature, we can see that columns are separated by TAB.

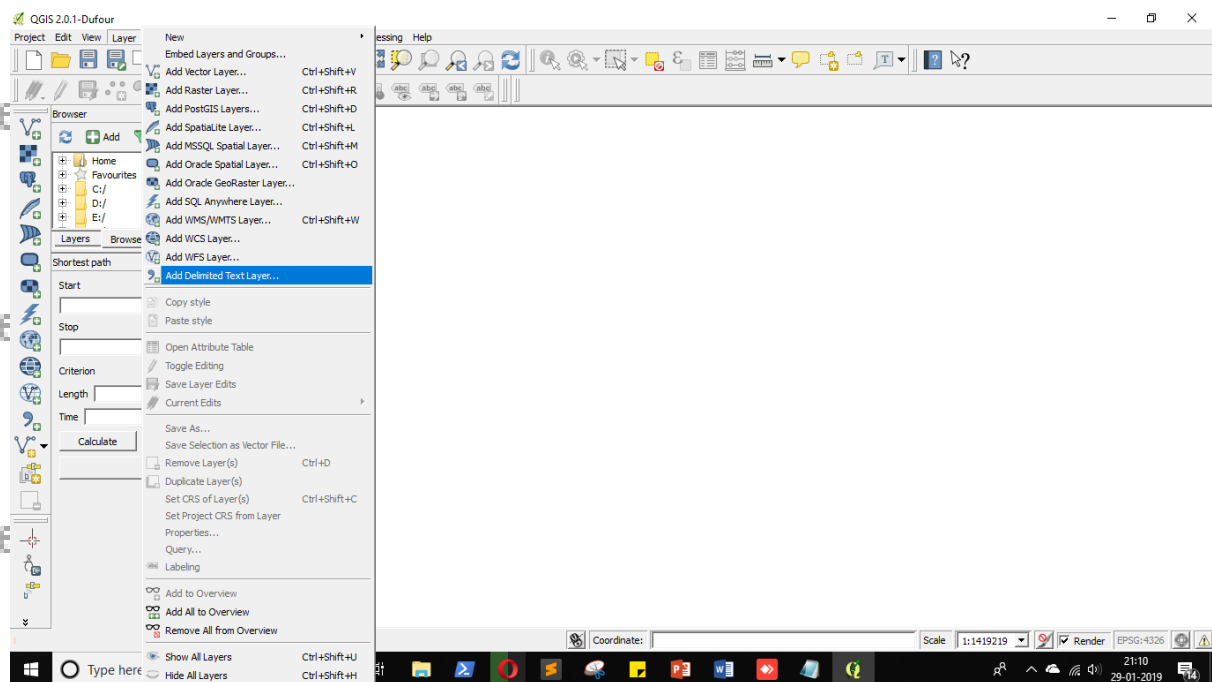


I_D	FLAG_TSUNAMI	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND	FOCAL_DEPTH	EQ_PRIMARY	EQ_MAG_MW	EQ
35.800	130	3									3
94	Tsu	-525									
	INDIA		INDIA:	KUTCH	23.000		71.000	60			
			2				9754	Tsu	-50		
.500	40							2		10	TURKEY
3					6.3	8		SOUTH KOREA			
		6.8		6.8				9	SOUTH KOREA: CHINA	KWANGJU CHINA:	35.900
44	ALY: VERONA, BENACO	45.300		11.000		130		1			GANSU PROVI
44	CRETE: KNOSSOS	35.000		23.000		130		3		9	TUR
	10.067	15								4	
			4								
H KOREA: PYONGYANG		39.000		125.300		30		3			2
528	11	29				7.1		7.1		10	TUR

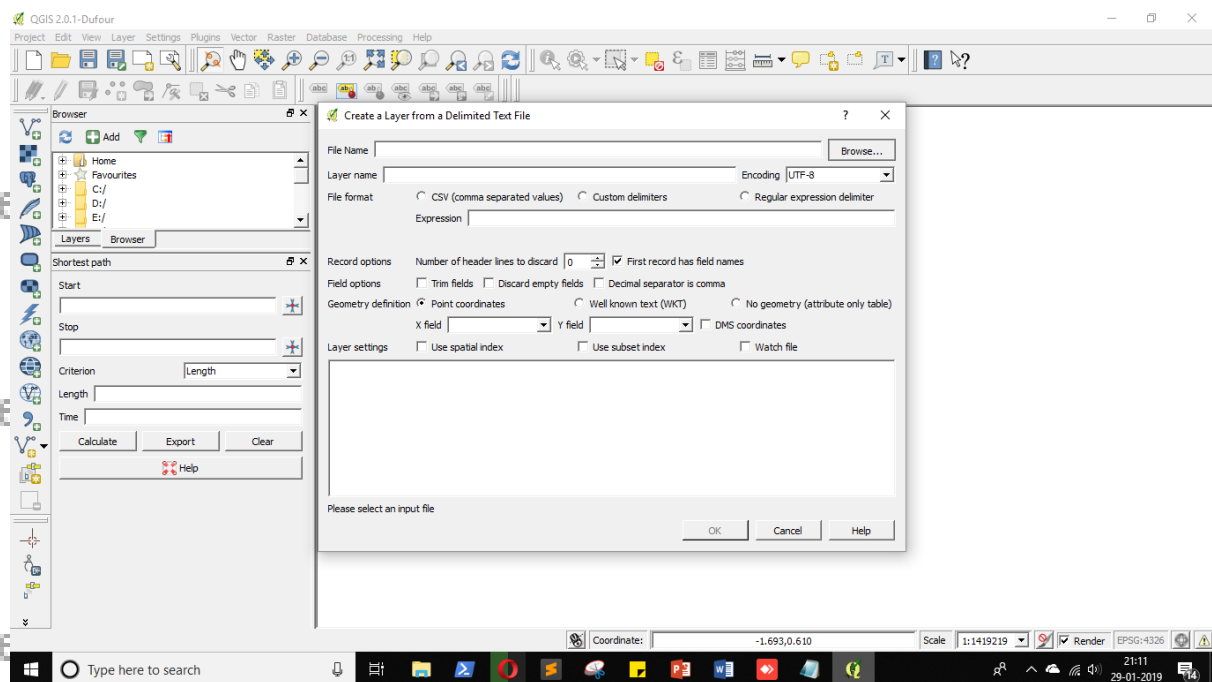
We are going to use QGIS 2.0.1 version.

First we have to call that data file in QGIS for that go to

## Layer > Add Delimited Text Layer...

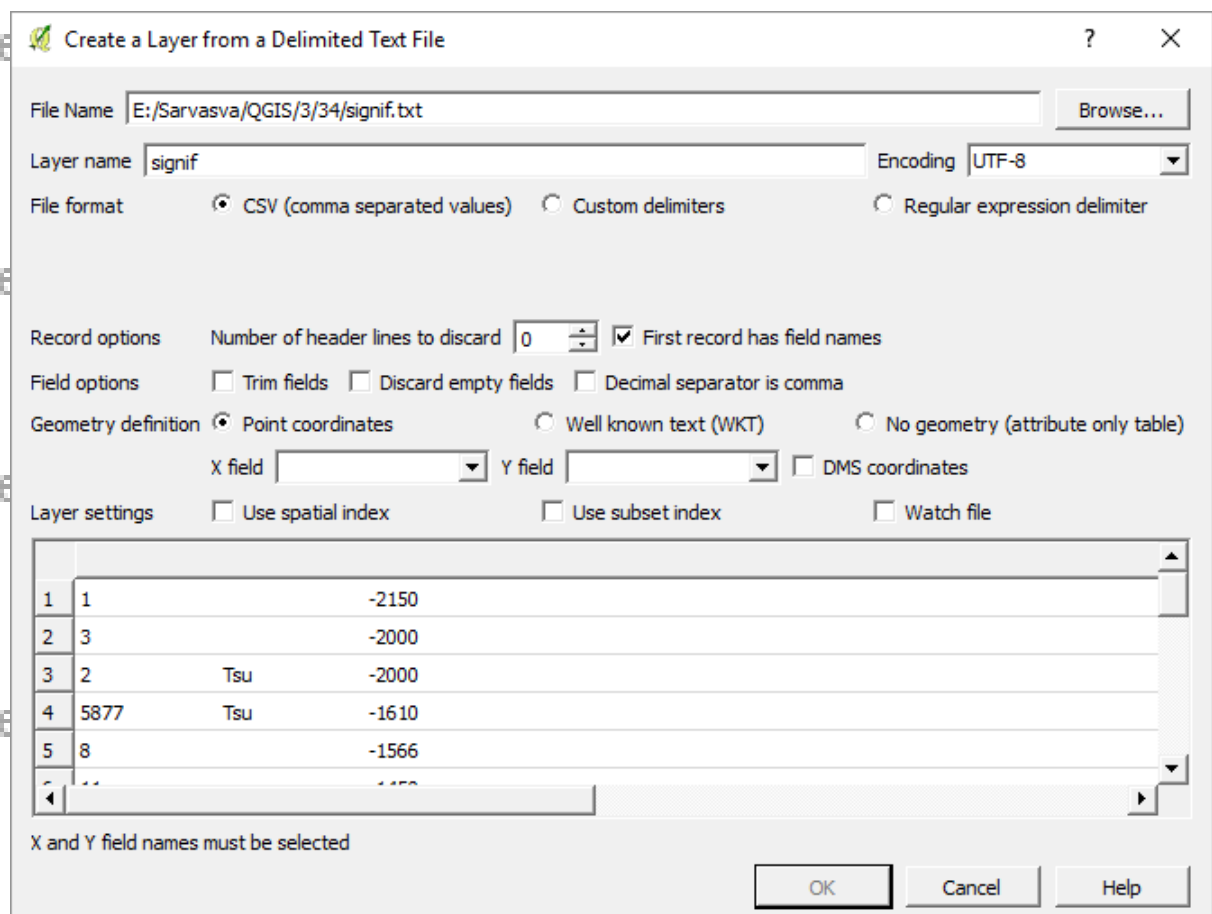
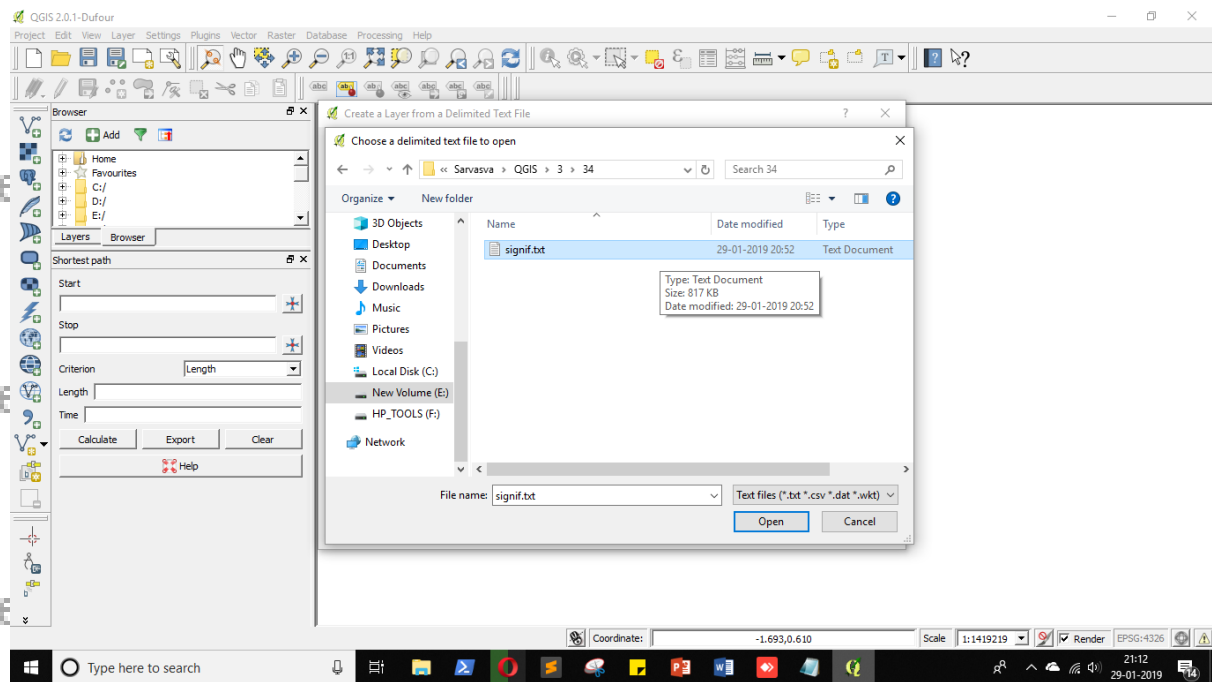


In “File Name” field we have to select our data file (“**signif.txt**”)



Click on **Browse...** “Browse...” button in front of “File Name” field.

Select “**signif.txt**” file and click “Open”.



In “**File format**” panel we have to select “**Custom delimiters**” radio button.

It will ask QGIS to read coordinate data from the file itself.

**Create a Layer from a Delimited Text File**

File Name:

Layer name:  Encoding:

File format: ☐ CSV (comma separated values) ☒ Custom delimiters ☐ Regular expression delimiter

☐ Comma ☒ Tab ☐ Space ☐ Colon ☐ Semicolon

Other delimiters:  Quote:  Escape:

Record options: Number of header lines to discard:  ☒ First record has field names

Field options: ☐ Trim fields ☐ Discard empty fields ☐ Decimal separator is comma

Geometry definition: ☒ Point coordinates ☐ Well known text (WKT) ☐ No geometry (attribute only table)

X field:  Y field:  ☐ DMS coordinates

Layer settings: ☒ Use spatial index ☐ Use subset index ☐ Watch file

	I_D	FLAG_TSNAMI	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND	FOCAL_DEPTH	EQ_PRIMARY	EQ_MAG
1	1		-2150							7.3	
2	3		-2000						18	7.1	
3	2	Tsu	-2000								
4	5877	Tsu	-1610								
5	8		-1566								

In “Geometry definition” we have to select “Point coordinates”, we can see that in “X field” drop box “LONGITUDE” and “LATITUDE” in “Y field” QGIS does this for us. It will scan the data file and find the field which contains coordinates data. Usually fields name are “LONGITUDE” and “LATITUDE”

Now in “Layer setting” panel select “Use spatial index” check box.

Click on “OK”

**Create a Layer from a Delimited Text File**

File Name:

Layer name:  Encoding:

File format: ☐ CSV (comma separated values) ☒ Custom delimiters ☐ Regular expression delimiter

☐ Comma ☒ Tab ☐ Space ☐ Colon ☐ Semicolon

Other delimiters:  Quote:  Escape:

Record options: Number of header lines to discard:  ☒ First record has field names

Field options: ☐ Trim fields ☐ Discard empty fields ☐ Decimal separator is comma

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	I_D	FLAG_TSUNAMI	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND	FOCAL_DEPTH	EQ_PRIMARY	EQ_MAG
1	1		-2150							7.3	
2	3		-2000						18	7.1	
3	2	Tsu	-2000								
4	5877	Tsu	-1610								
5	8		-1566								
6	...		...								

This error will show up, it is because of missing X and Y values. We can ignore this error for this practical. Click on **“Close”**.

**Delimited text file errors**

Errors in file E:/Sarvasva/QGIS/3/34/signif.txt

49 records discarded due to missing geometry definitions

6 records discarded due to invalid geometry definitions

The following lines were not loaded into QGIS due to errors:

Invalid X or Y fields at line 307

Invalid X or Y fields at line 2263

Invalid X or Y fields at line 3258

Invalid X or Y fields at line 3343

Invalid X or Y fields at line 3384

Invalid X or Y fields at line 3439

Now it will ask for CRS details, select **“WGS 84 EPSG:4326”** and press **“OK”**.

Coordinate Reference System Selector
?
X

Specify CRS for layer signif

Filter

**Recently used coordinate reference systems**

Coordinate Reference System	Authority ID
* Generated CRS (+proj=aea +lat_1=20 +lat_2=60 +lat_0=40 +...	USER:100000
OSGB 1936 / British National Grid	EPSG:27700
WGS 84	EPSG:4326
North_America_Albers_Equal_Area_Conic	EPSG:102008

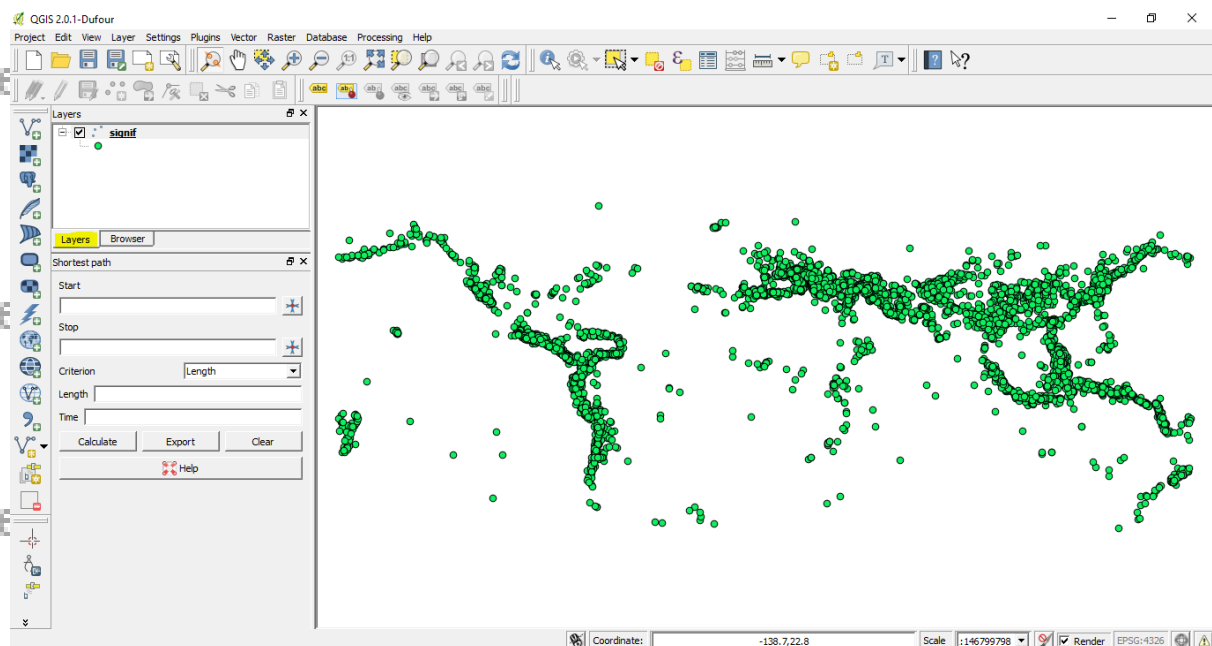
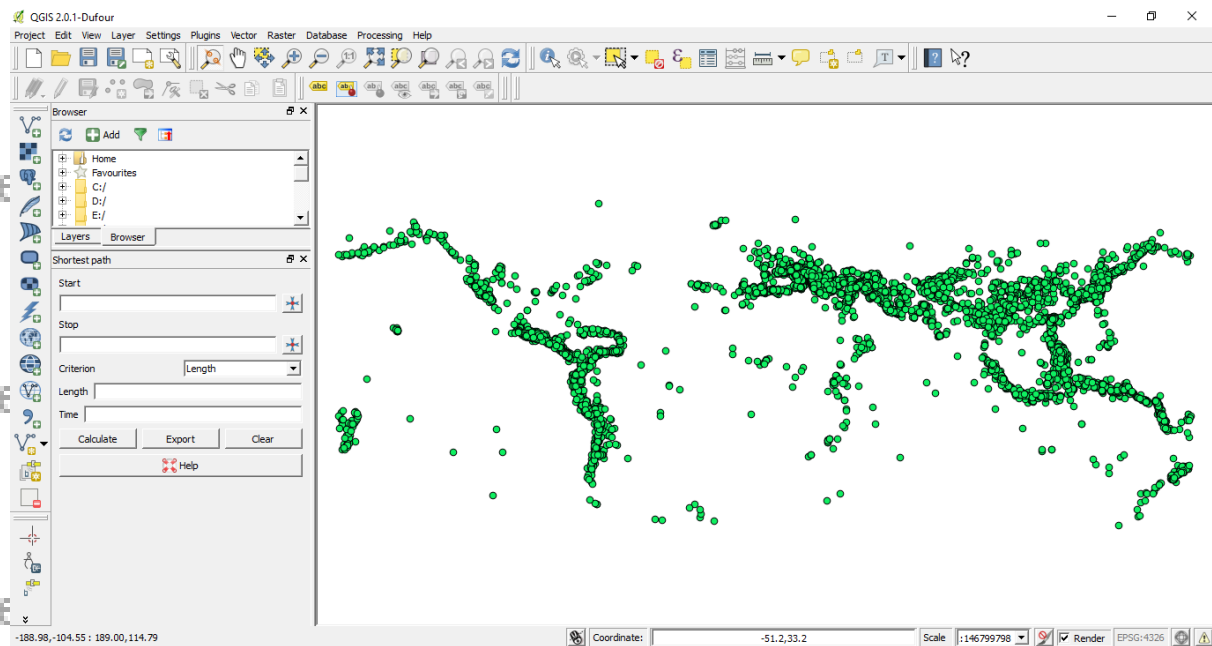
**Coordinate reference systems of the world**
☐ Hide deprecated CRSs

Coordinate Reference System	Authority ID
Voirol 1879 (Paris)	EPSG:4821
WGS 66	EPSG:4760
WGS 72	EPSG:4322
WGS 72BE	EPSG:4324
WGS 84	EPSG:4326

**Selected CRS:** WGS 84

+proj=longlat +datum=WGS84 +no\_defs

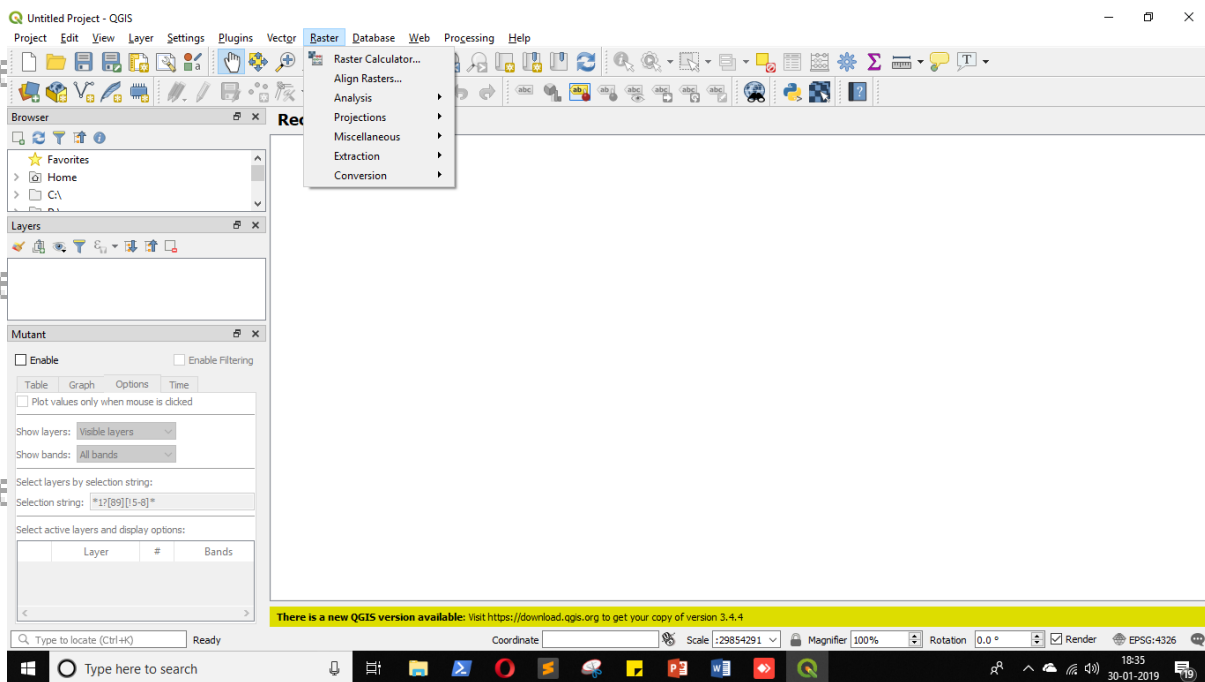
OK
Cancel
Help



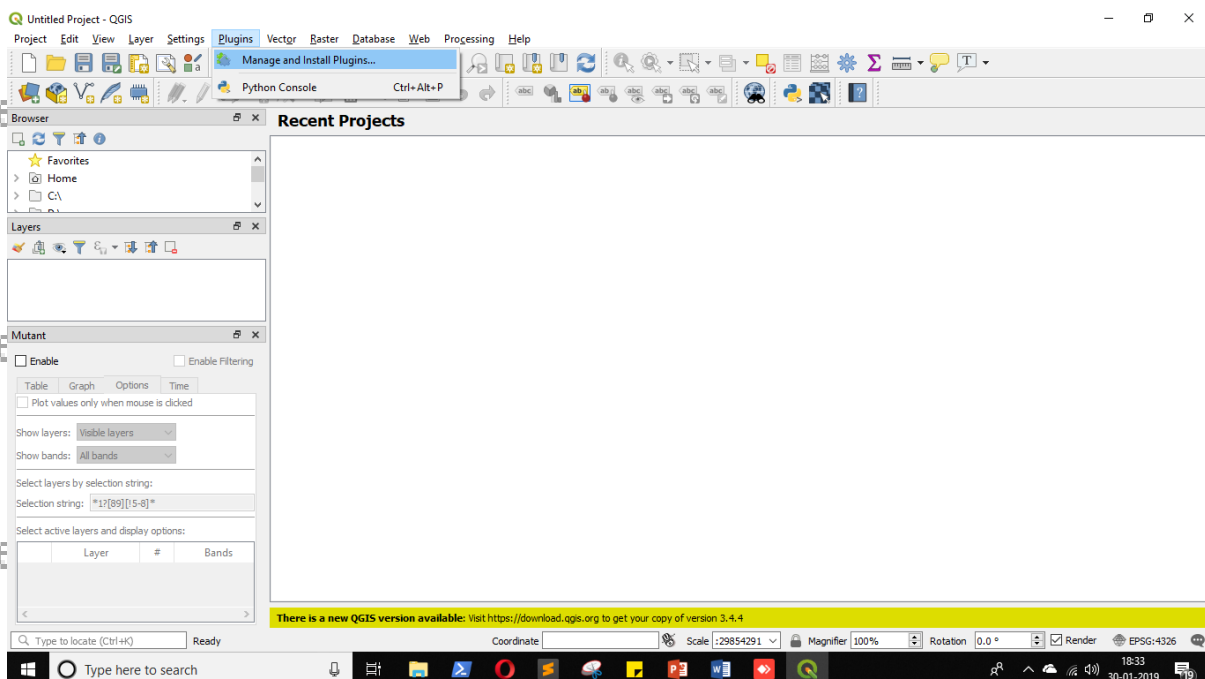
We can see that in “**Layer**” panel we have the layer named “**signif**” and in canvas the data is been represented in form on point shape feature.

## Using Plugins

Plugins are the additional program to the software which help us to perform operations on data. In QGIS we can find many plugins installed already those are called core plugins. We can add extra plugins which are developed by QGIS team or another developer. In QGIS many plugins are installed already but are hidden like “**Georeferencer**” in “**Raster**” tab.

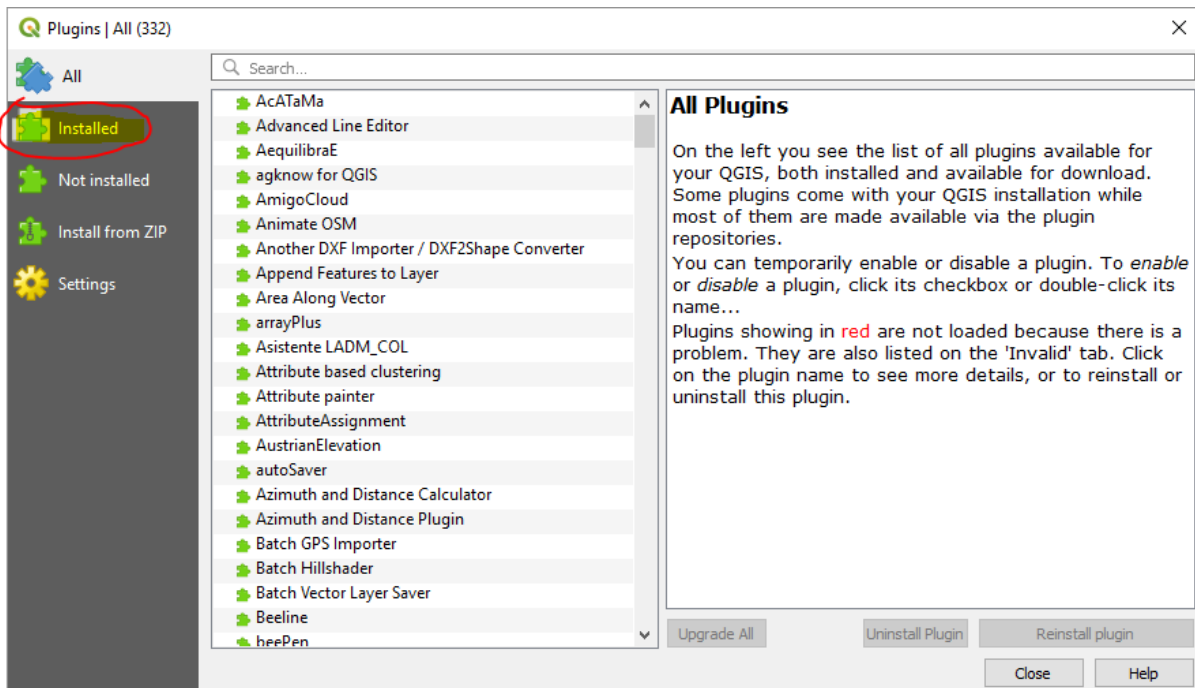


Currently we can't see “**Georeferencer**” option we have to make it visible, for that go to **Plugins > Manage and Install Plugins...**

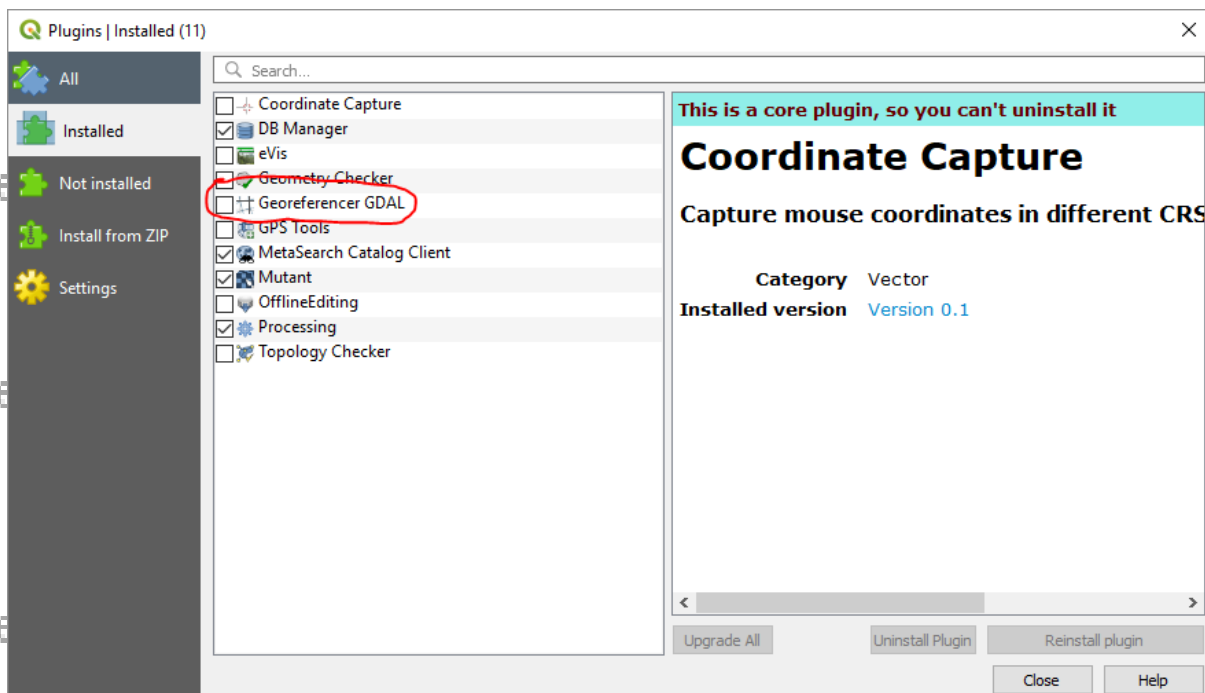




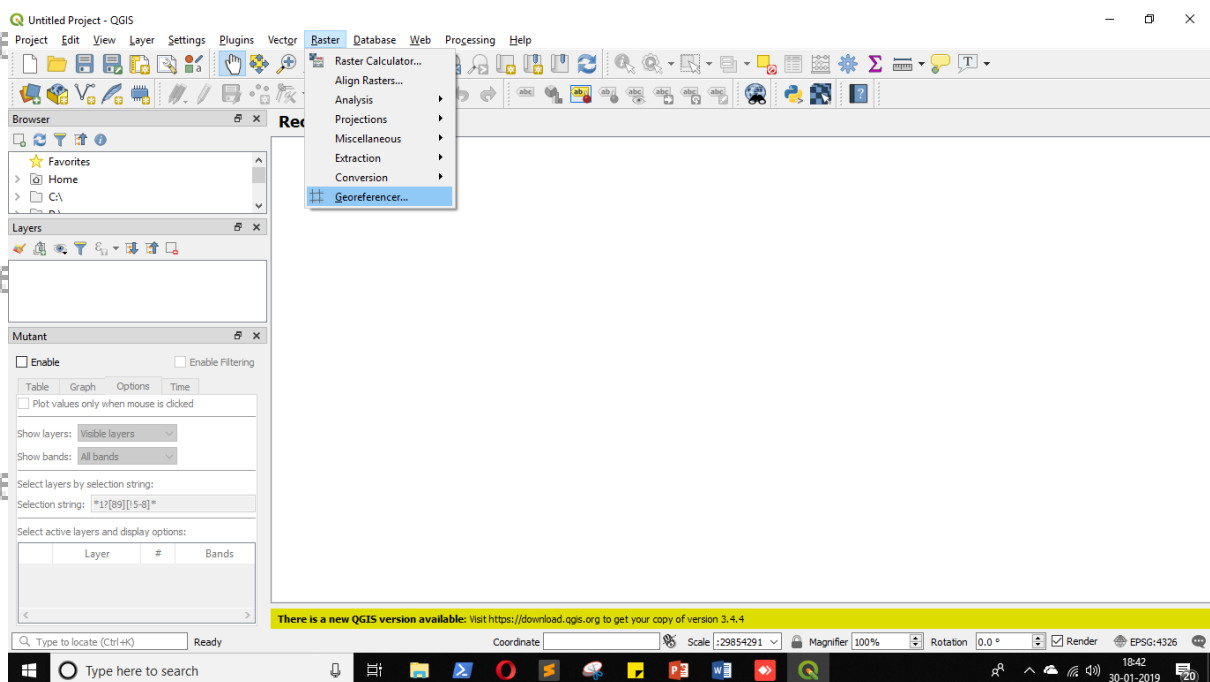
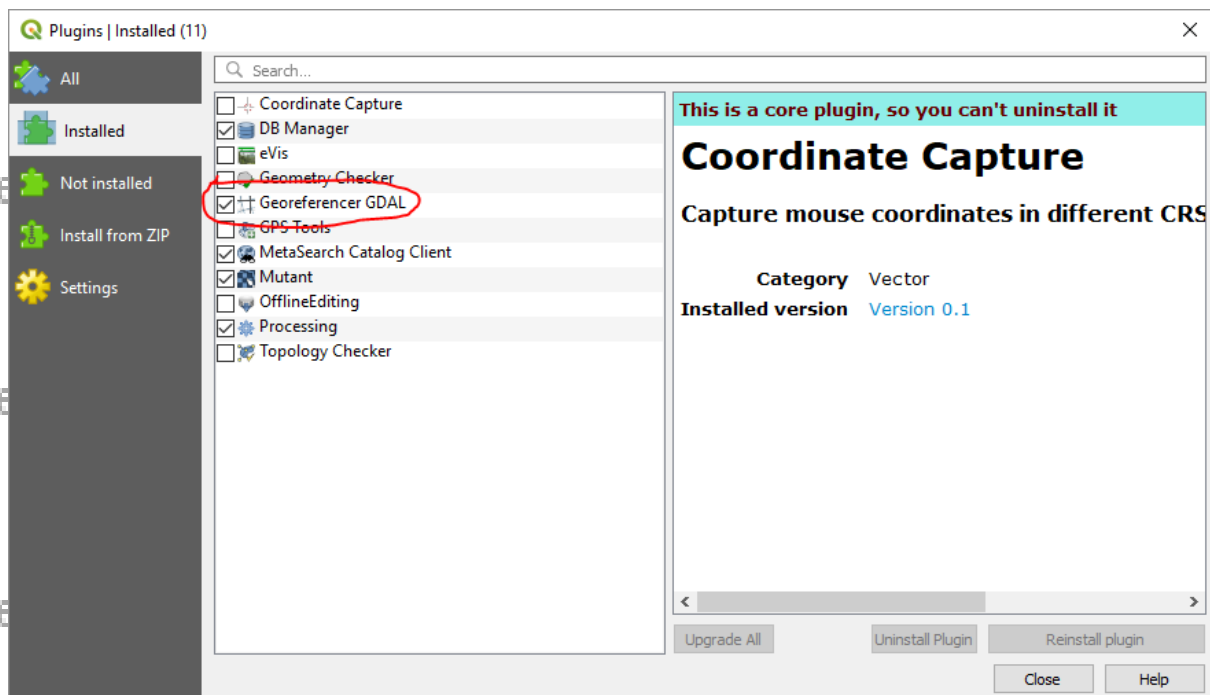
Plugins window will appear, click on “Installed” tab.



We can see “**Georeferencer GDAL**” is unchecked, to make it visible we have to check it and click “Close”.

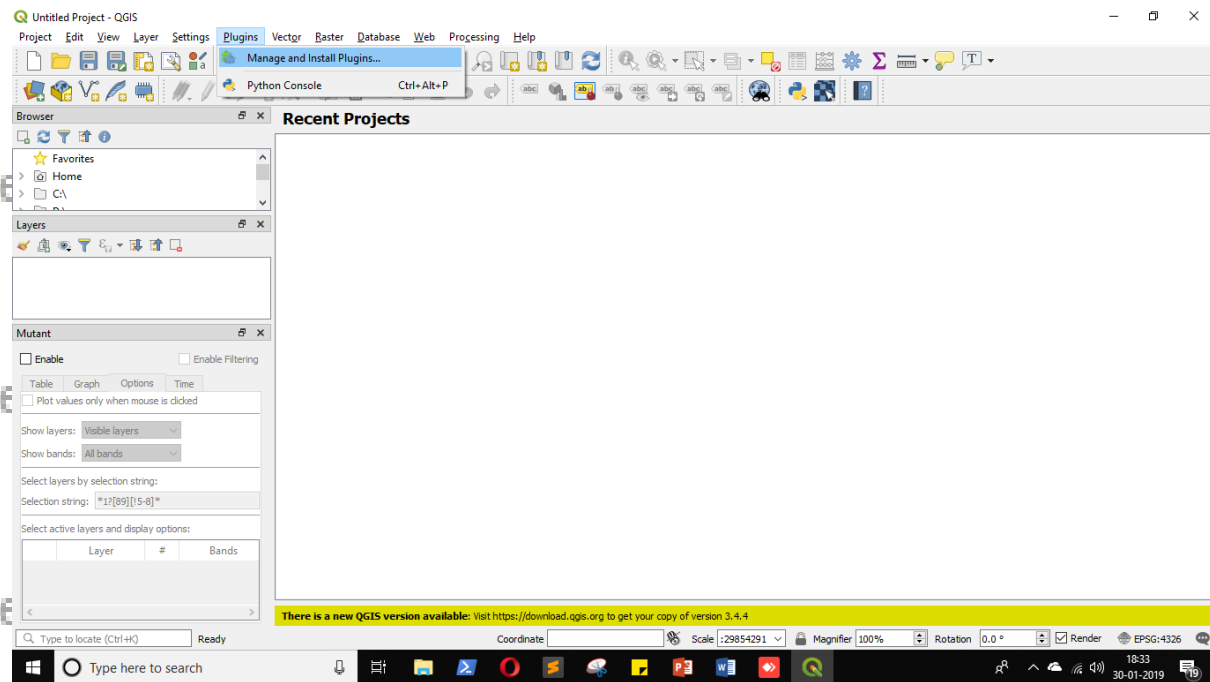


“**Georeferencer GDAL**” is a core plugin and we can’t uninstall it.

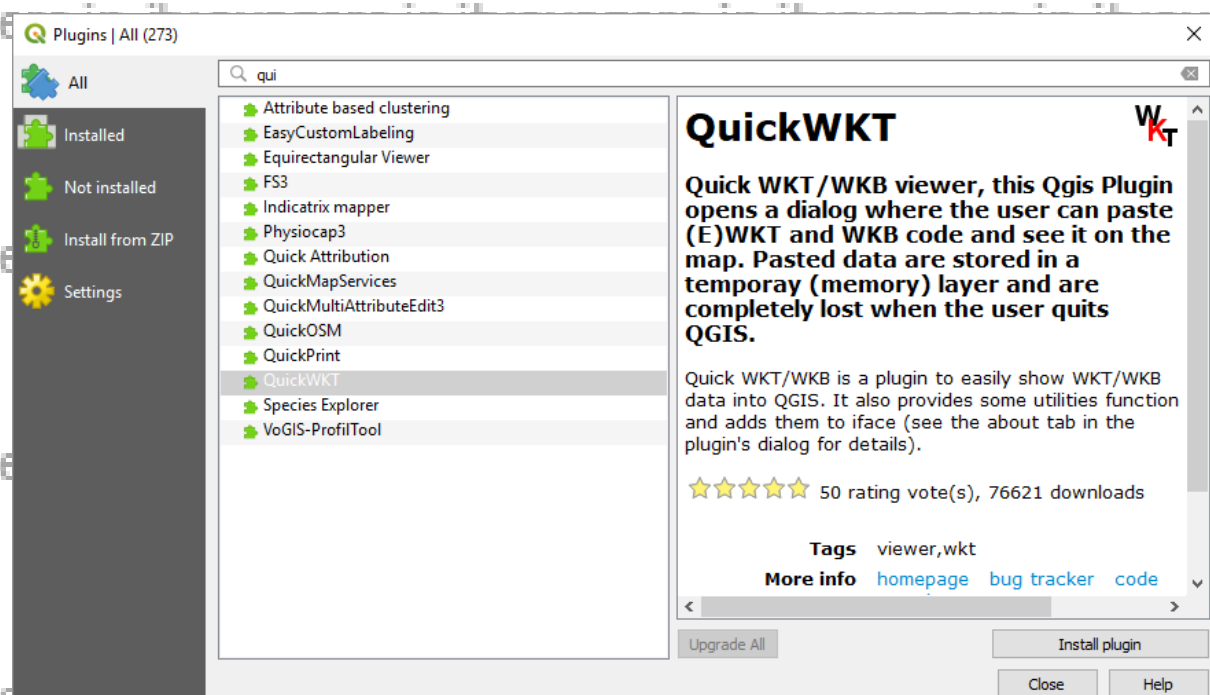


Now let's install new plugin in QGIS, go to

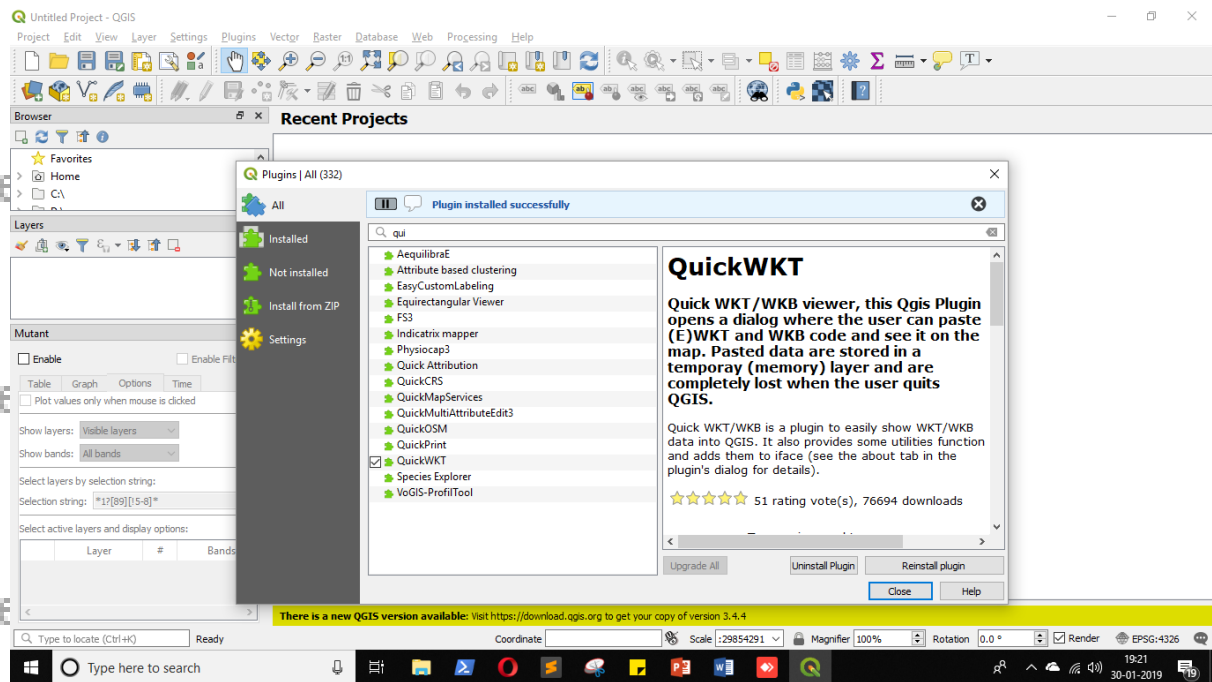
Plugins > Manage and Install Plugins...



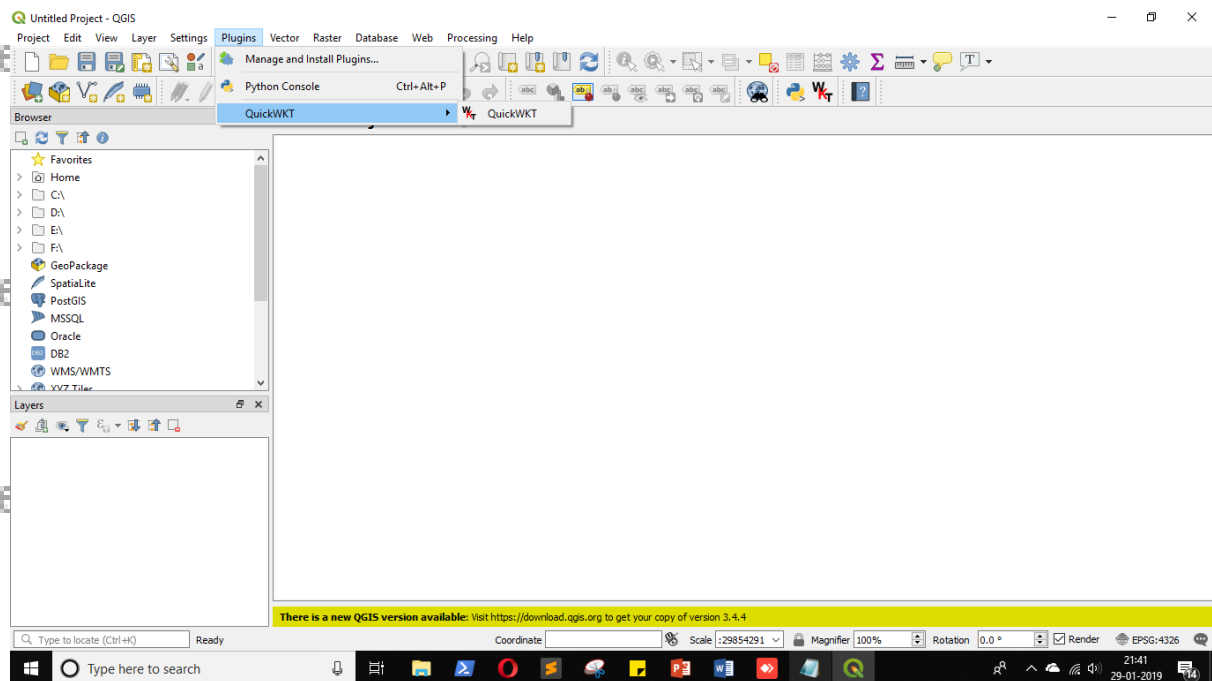
Type **“qui”** in search bar we can see **“QuickWKT”** plugin select it and click on **“Install Plugin”** button.



Now close the window.



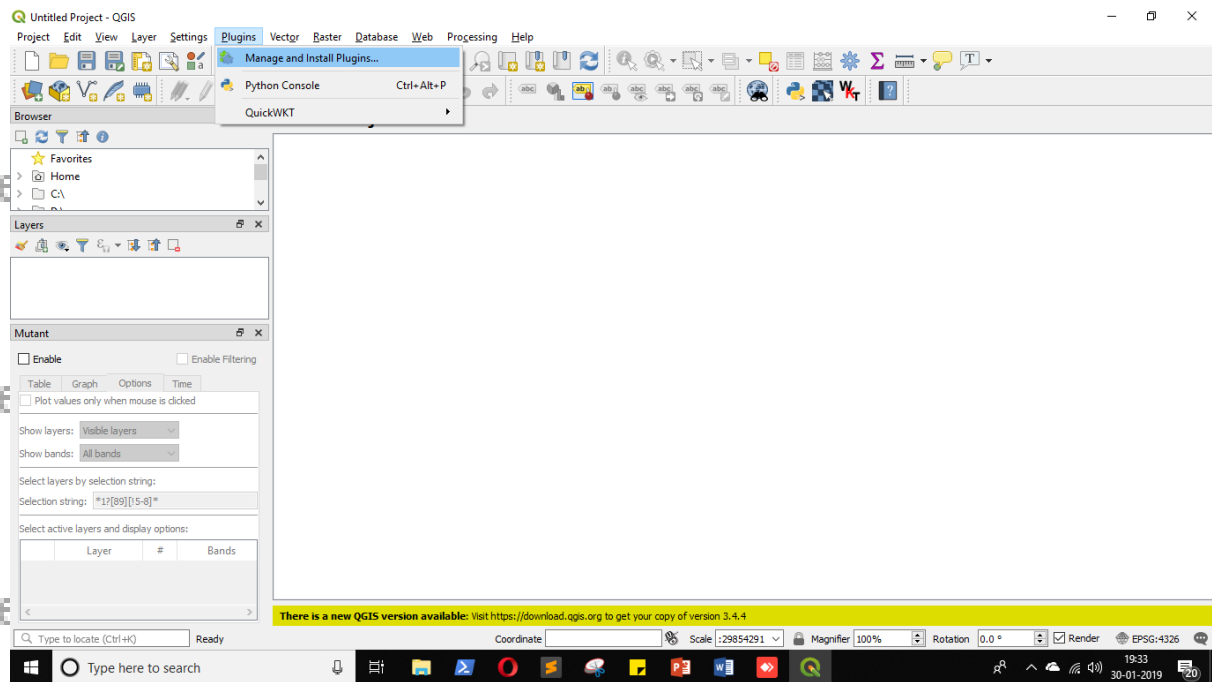
Now we can see “QuickWKT” plugin in “Plugins” tab.



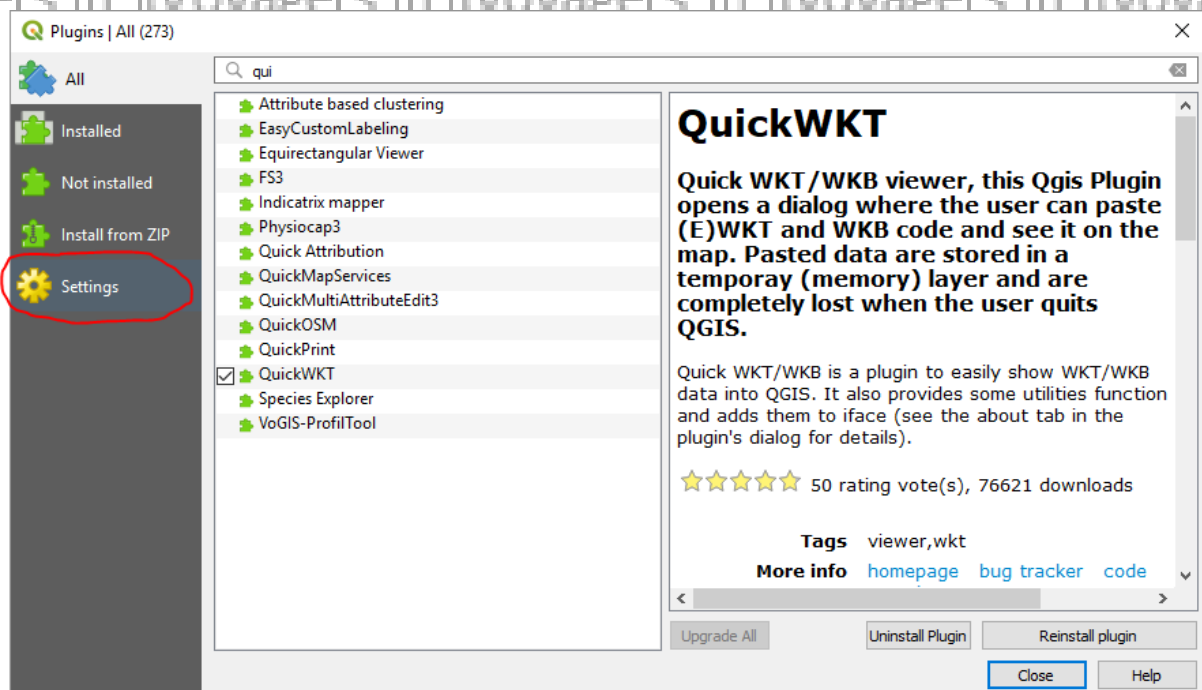
Some plugins are marked as Experimental, we can't find them in normal settings.

To install those plugins we have to open Plugins window again. Go to

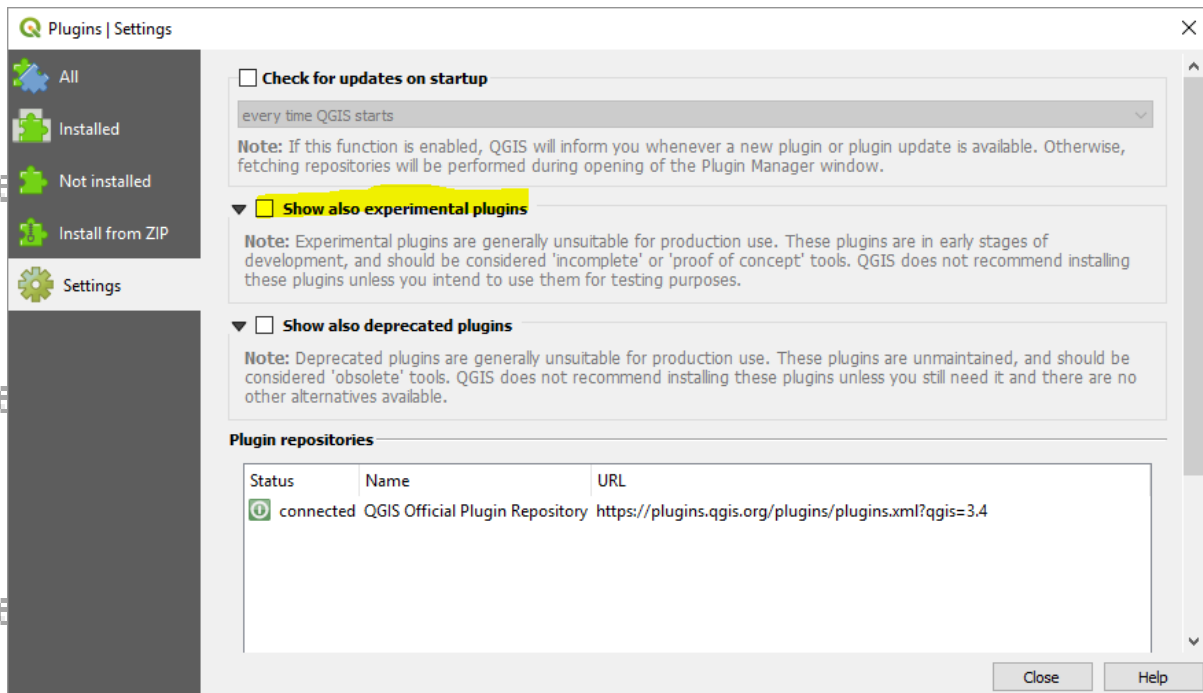
Plugins > Manage and Install Plugins...



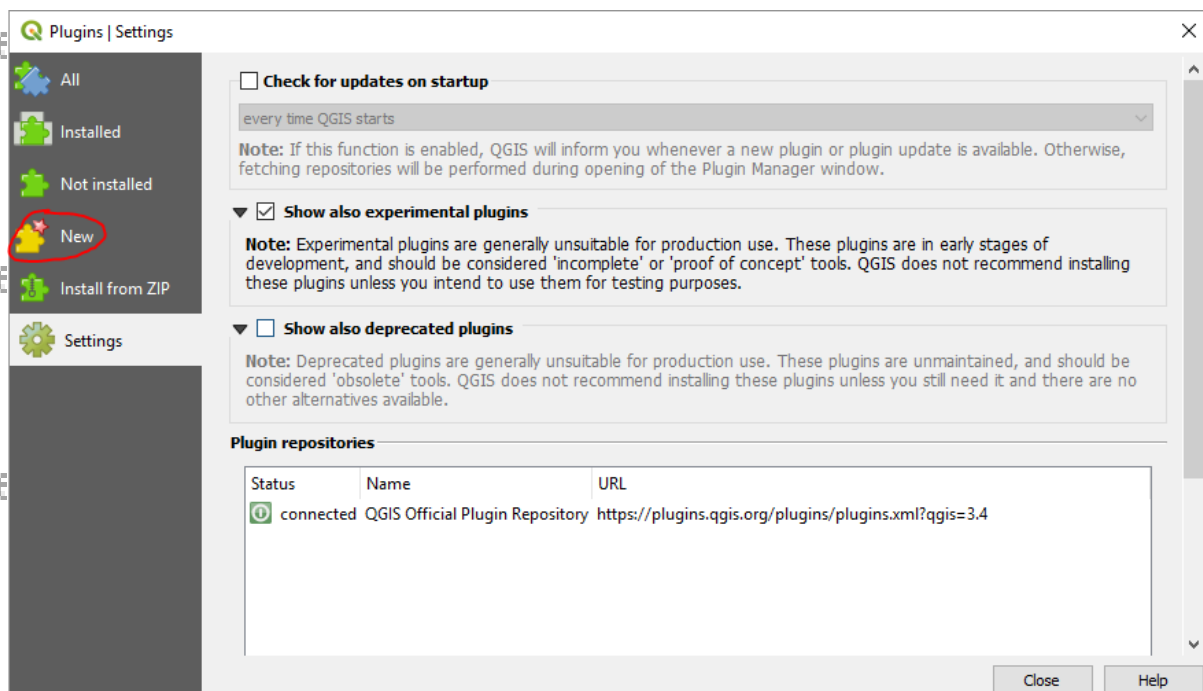
Go to **“Settings”** tab.



We have to check **“Show also experimental plugins”** check box.

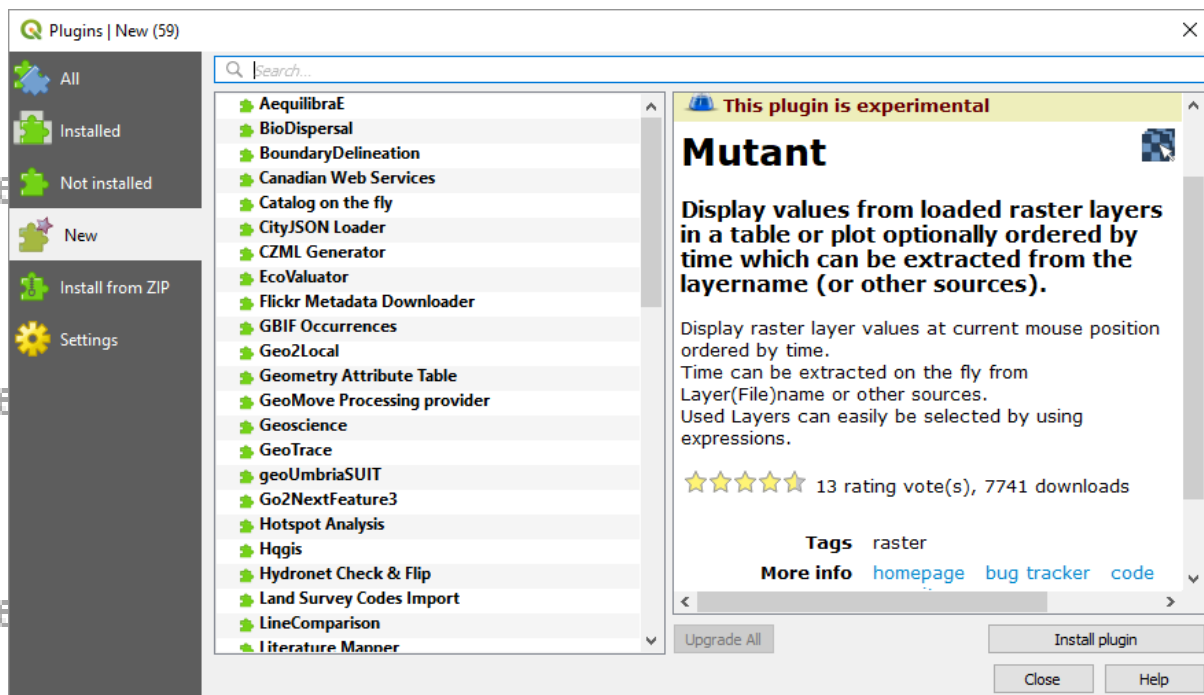


We can see that new tab named “New” is been added to Plugins window, Click on it.

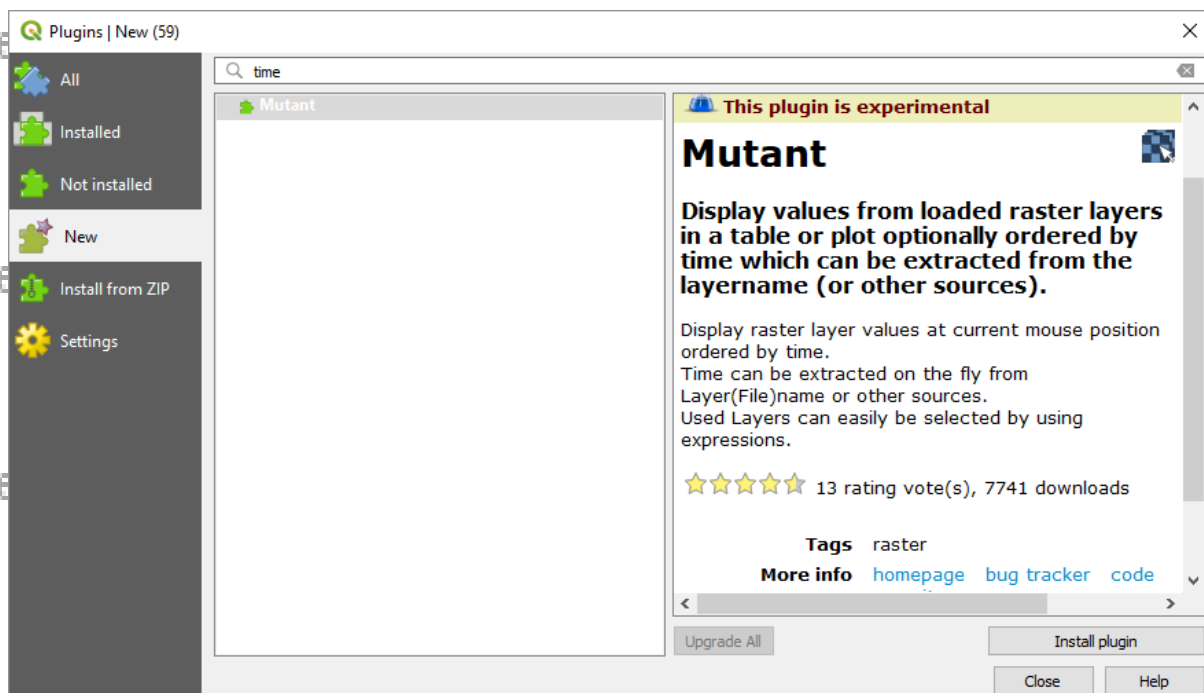


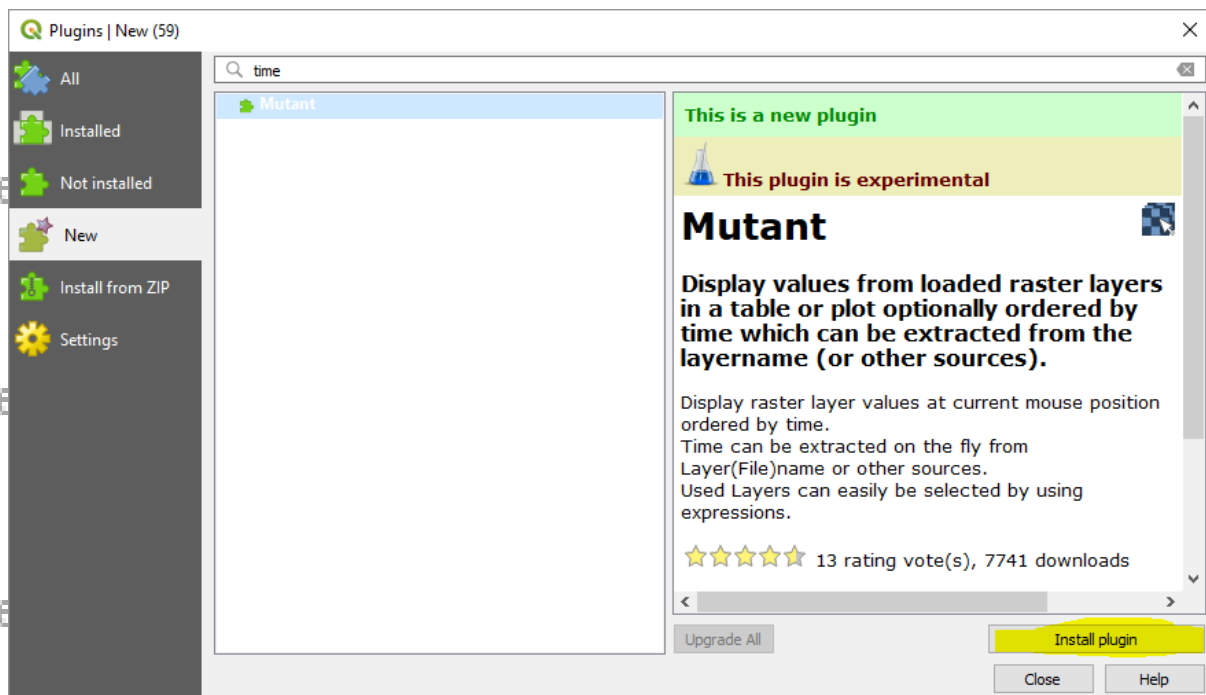
Let's search some plugins for “time”.

Enter “time” in search box.



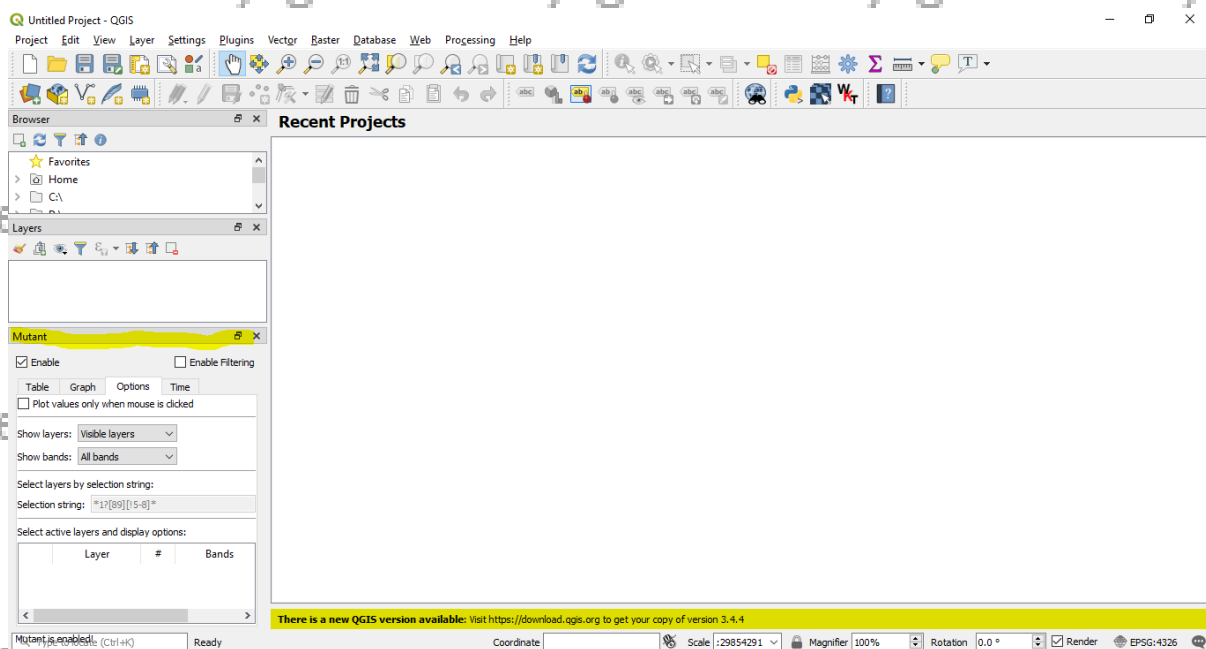
Yes we have one named “**Mutant**”, select it and click on “**Installed plugin**”.





Close the window after installation.

Yes we can see that our plugin has been added in QGIS



We can find this plugin in

View > Panels > Mutant



