

DAY 3

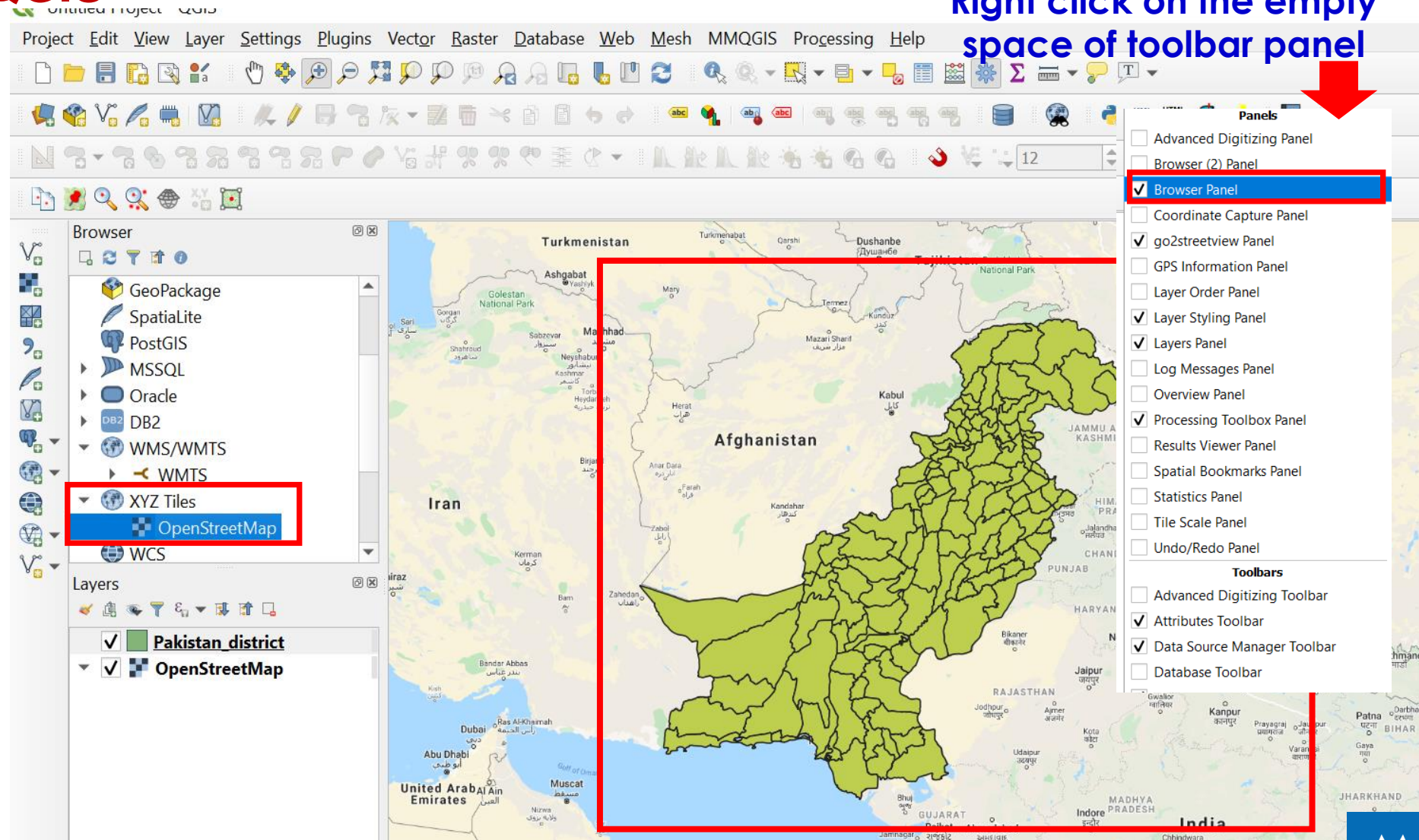
Exercise 2

Earth observation
collection using QGIS

Earth observation collection using QGIS

Adding base map in QGIS

- Launch QGIS and click on empty space of the **Menu Toolbar**
- Click on **Browser Panel** -> **XYZ tiles** -> **Open Street Map**



Earth observation collection using QGIS

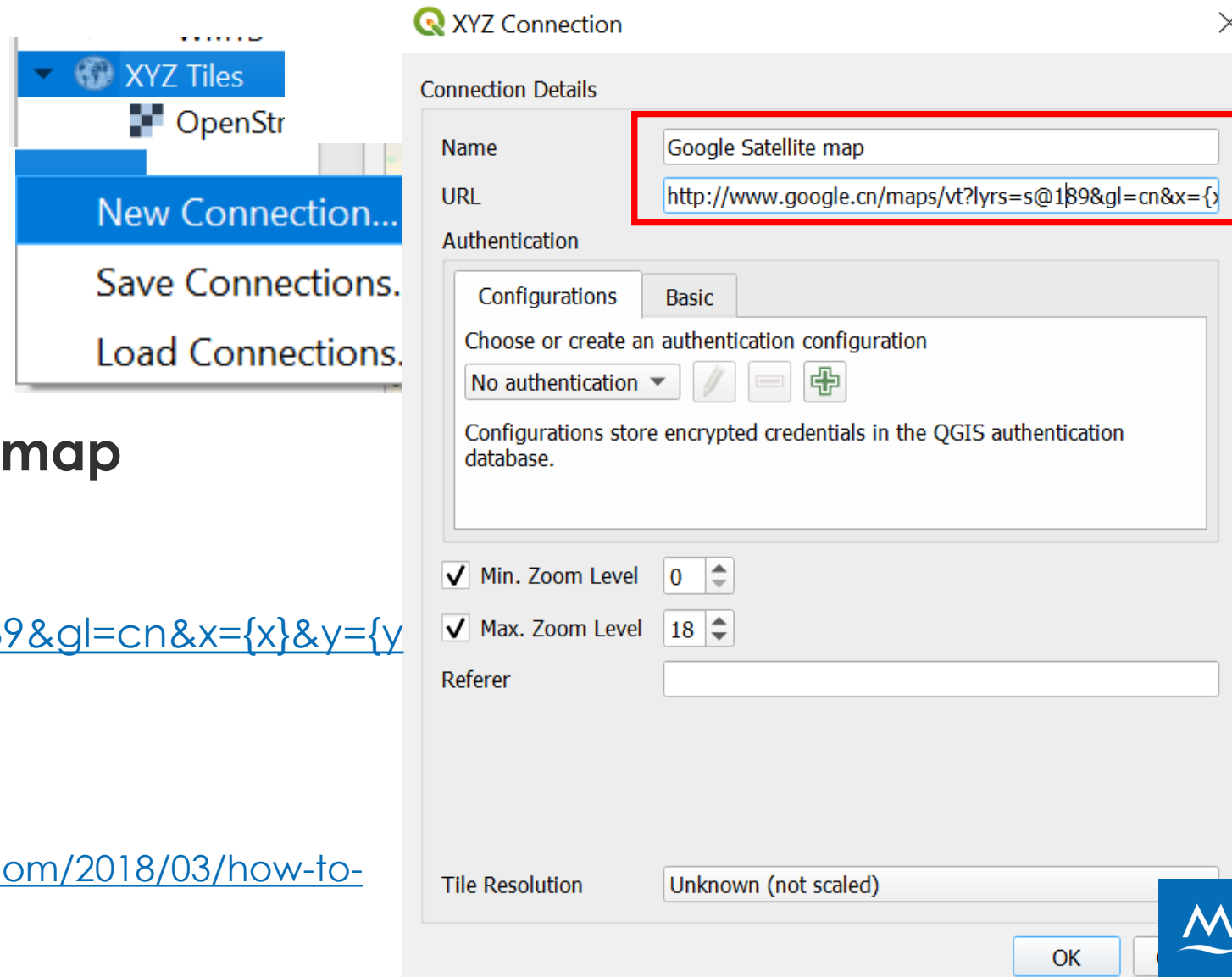
Adding google satellite data as base map in QGIS

- Click on **Browser Panel**
- **Right click on XYZ tiles -> New Connection**
- A window opens
- Under the **Name** enter **Satellite map**
- Under the **URL** paste

<http://www.google.cn/maps/vt?lyrs=s@189&gl=cn&x={x}&y={y}&z={z}>

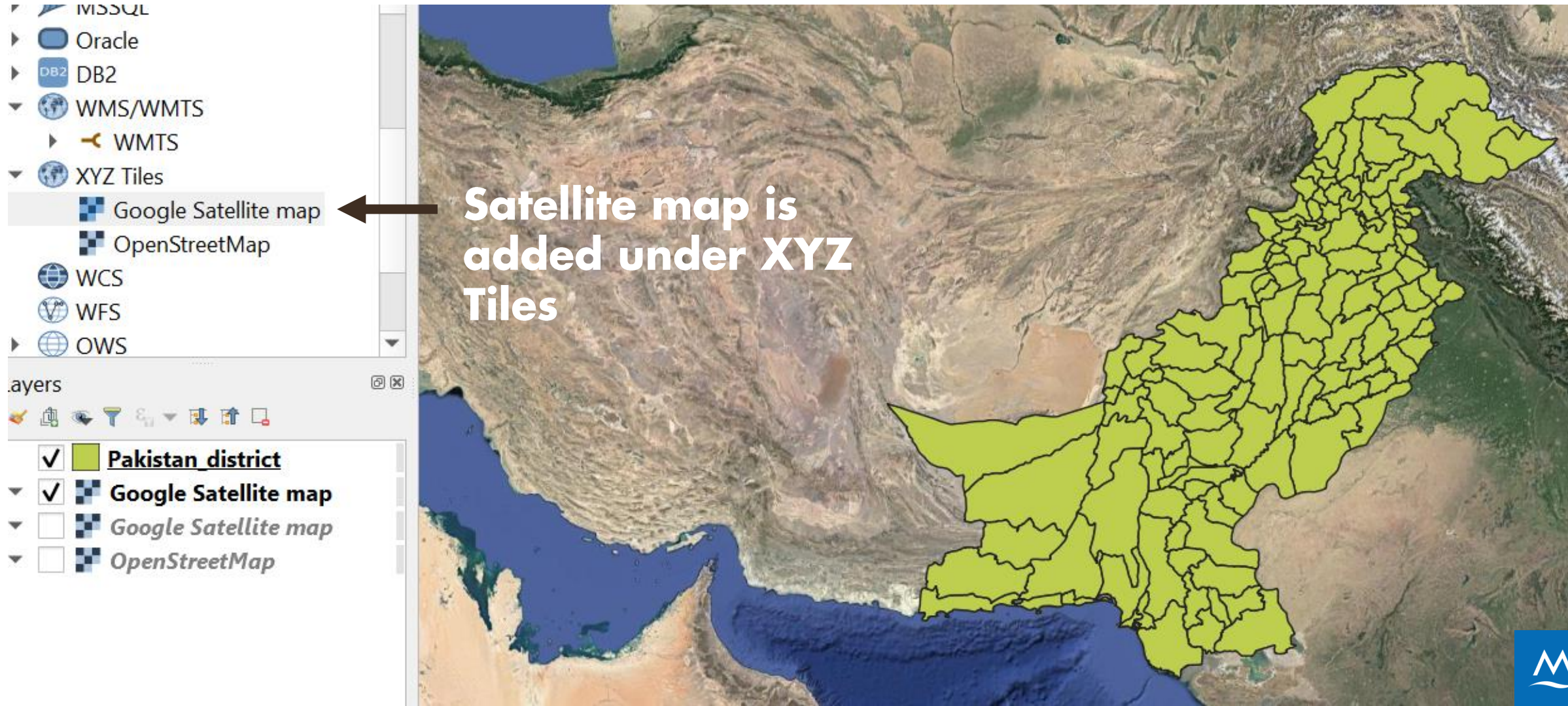
- Click **OK**

*Link to add other maps: <https://www.geodose.com/2018/03/how-to-add-google-maps-layer-QGIS-3.html>




Earth observation collection using QGIS

Adding google satellite data as base map in QGIS



Earth observation collection using QGIS

Creating new shapefile

- Click on  icon to create new shapefile
- A window opens
- Enter the **File name** of shapefile to be created i.e. **LULC_Pakistan**
- Select **Geometry type** as **Point**
- Under the **New Field** enter the field title as **LULC**
- Choose **Type** as **Text data** and click **OK**
- **LULC_Pakistan.shp** is added in the Layers panel

New Shapefile Layer

Specify the name for shapefile

File name: LULC_Pakistan

File encoding: UTF-8

Geometry type: Point

Additional dimensions: ☒ None ☐ Z (+ M values) ☐ M values

CRS: EPSG:32642 - WGS 84 / UTM zone 42N

Specify the title for the field

Specify the type

New Field

Name:

Type: abc Text data

Length: 80 Precision:

Add to Fields List

Fields List



Name	Type	Length	Precision
id	Integer	10	
LULC	String	80	

Remove

OK Cancel

Earth observation collection using QGIS


Editing of newly built shapefile (Point)

- Select the layer from the **Layer panel**
- Click on the **toggle editing** icon 
- Click on the **Add point feature** icon 
- Start collecting point features

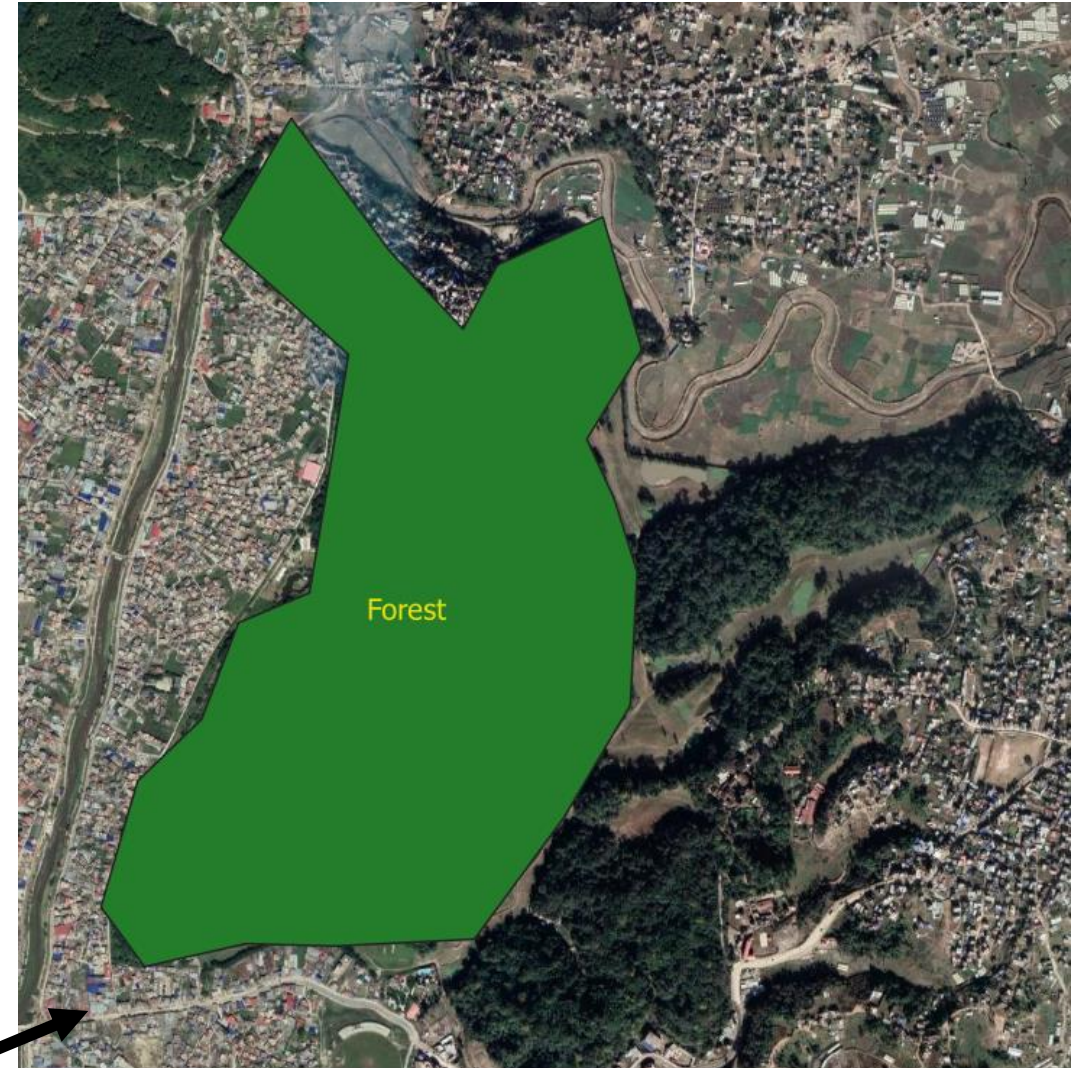
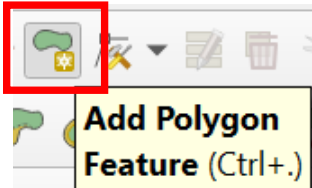


Earth observation collection using QGIS

Creating new shapefile

- Follow the same steps to create polygon shapefile as done for point shapefile
- Once the polygon layer is added in the Layer Panel click **toggle editing mode**
- Click on the icon  From the **Vector toolbar Panel**
- Start digitization

Newly build polygon shapefile



Earth observation collection using QGIS

Editing of newly built shapefile (Polygon)

Setting transparent color to polygon

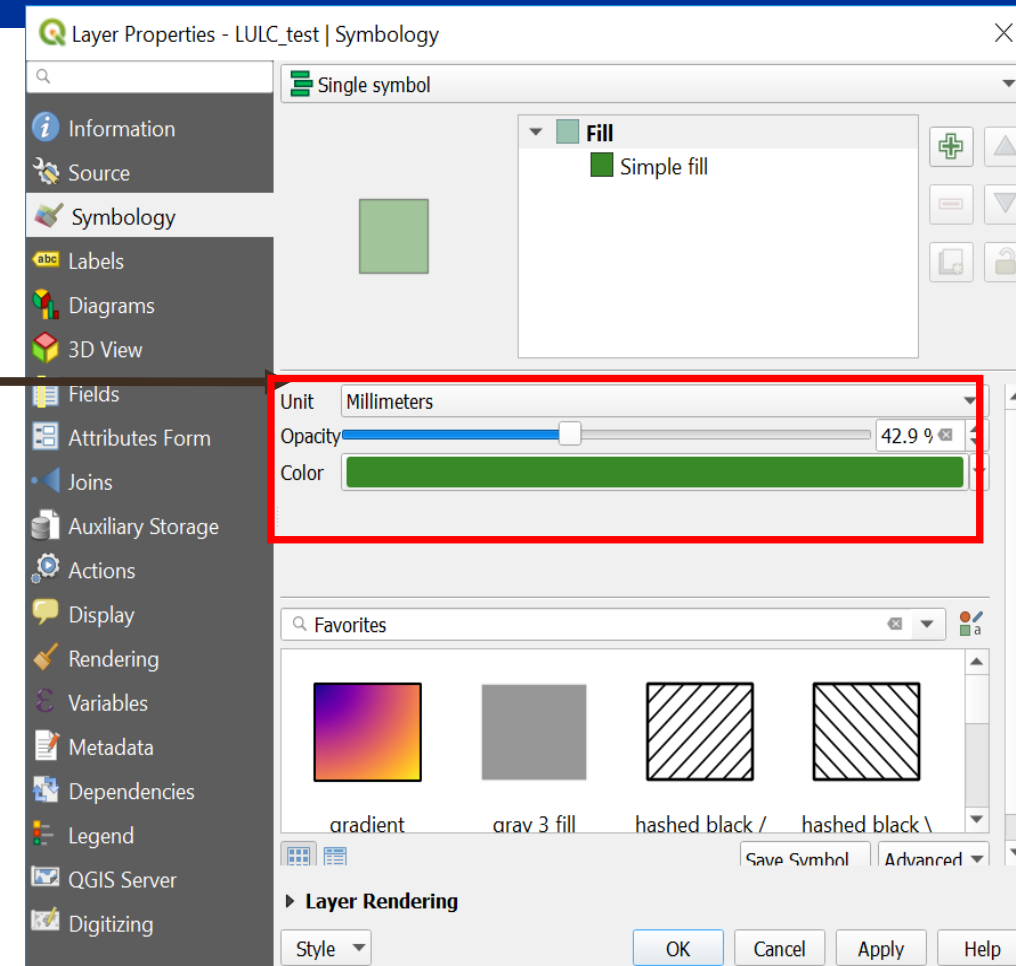
➤ Click on **Properties-> Symbolology->**

Layer Rendering

➤ Change the **opacity** parameter from

100% to 50%

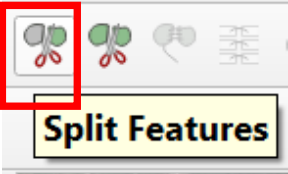
➤ Click **apply**

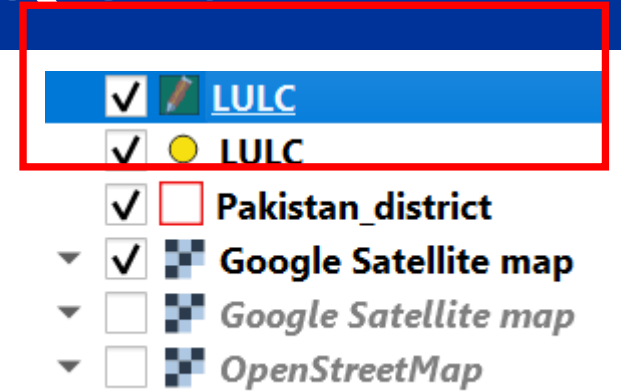


Earth observation collection using QGIS

Editing of newly built shapefile (Polygon)

Splitting polygon

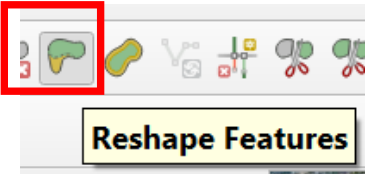
- Select layer in the **Layer Panel**
- Click on the icon  **Split Features**
- Place your mouse on the polygon (from where you want to split) and **click** outside the polygon
- Drag the mouse over the another end of the polygon (where you want to end the split) and **click** and then **right click**
- Polygon is splitted into two →



Earth observation collection using QGIS

Editing of newly built shapefile (Polygon)

Reshape polygon (helpful for adding or deleting certain region)

- Select your layer
- Click on the icon  **Reshape Features**
- Place your mouse (where you want to add the part)
- Start digitizing from the inside of the polygon
- Come back to the inside of the polygon and **click** and then **right click**





Earth observation collection using QGIS

Editing of newly built shapefile (Polygon)

Using Snapping tool (Helpful for tracing and snapping at intersection)



- Open the **Pakistan_district.shp** file from the folder **D:\day1\day1_exercise\Exercise 1**

- Click on the icon →  **Enable Snapping (S)**

- Click on Advanced Configuration →  **Advanced Configuration**

- Edit Advance Configuration →  **Edit advanced configuration**


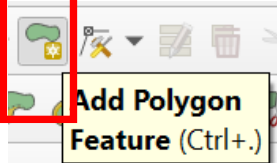
- **Select both the layers** (Editable and traceable layer)

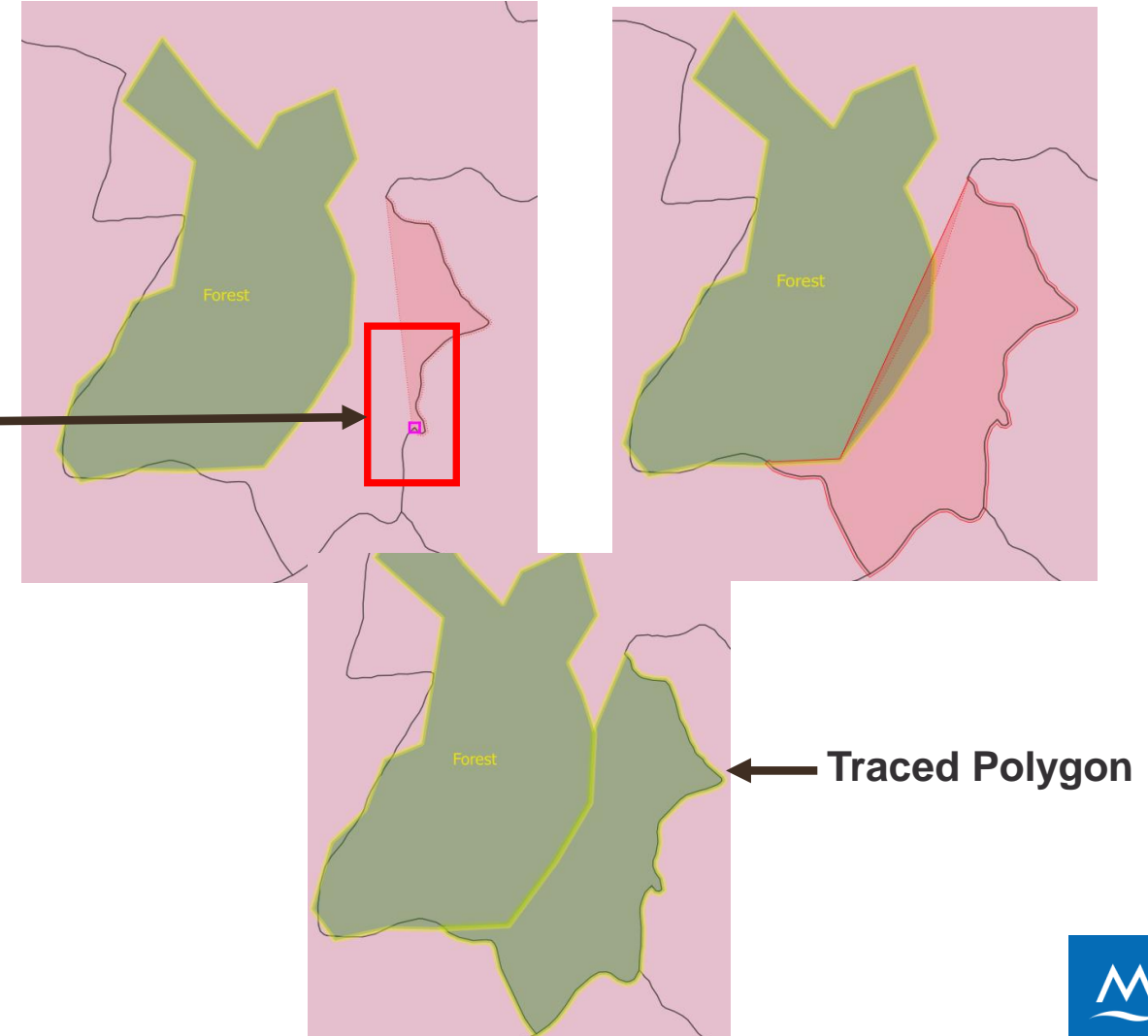
Layer	Type	Tolerance
<input checked="" type="checkbox"/>  LULC	vertex	12
<input checked="" type="checkbox"/>  Pakistan_district	vertex	12

Earth observation collection using QGIS

Editing of newly built shapefile (Polygon)

Using Snapping tool (Helpful for tracing and snapping at intersection)

- Select the icon  
- Click on the **Pakistan_district.shp**
- You will notice a purple color icon snapping guideline
- Start **tracing**
- Click on the polygon and finish the tracing



Earth observation collection using QGIS

Editing of newly built shapefile (Line)

Create the line shapefile Yourself



A photograph of a rugged, snow-capped mountain peak under a clear sky. The mountain's face is dark and rocky, with patches of white snow and ice. A large, white, stylized chevron graphic is overlaid on the left side of the image. The foreground shows a steep, rocky slope with some sparse vegetation.

Thank you

**Let's protect
the pulse.**