

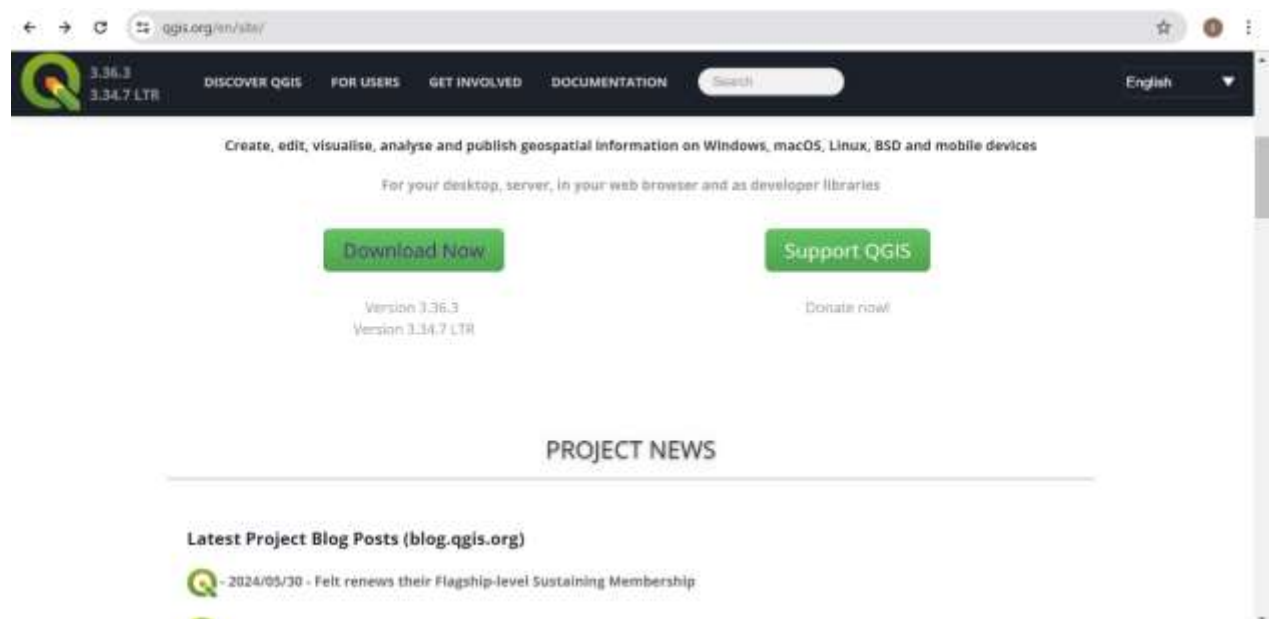
# How to Download CORINE, Global Wind Atlas and WorldCover Land Cover Data

## Tutorial Summary:

Learn how to download CORINE, Global Wind Atlas and WorldCover land cover data for Continuum modelling. CORINE (Coordination of information on the environment) covers Europe while the Global Wind Atlas and WorldCover include land cover across the globe. Land cover data is used to estimate surface roughness and displacement height which are used in the Continuum® wind flow model.

1) Go to QGIS site and download and install free GIS software:

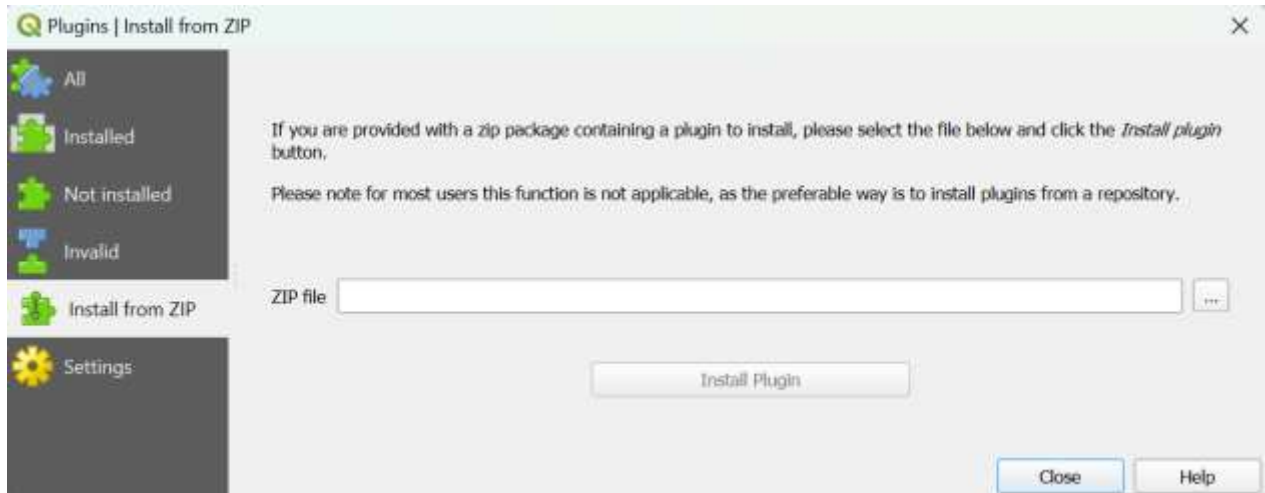
<https://www.qgis.org/en/site/>



1) Go to below link and download the "wasp\_scripts.zip". Open QGIS software and to Go to Plugins > Manage and Install plugins > Install from ZIP, provide to zip file above and click Install Plugin

[https://data.dtu.dk/articles/software/Using\\_QGIS\\_to\\_create\\_WAsP\\_maps/20495178](https://data.dtu.dk/articles/software/Using_QGIS_to_create_WAsP_maps/20495178)

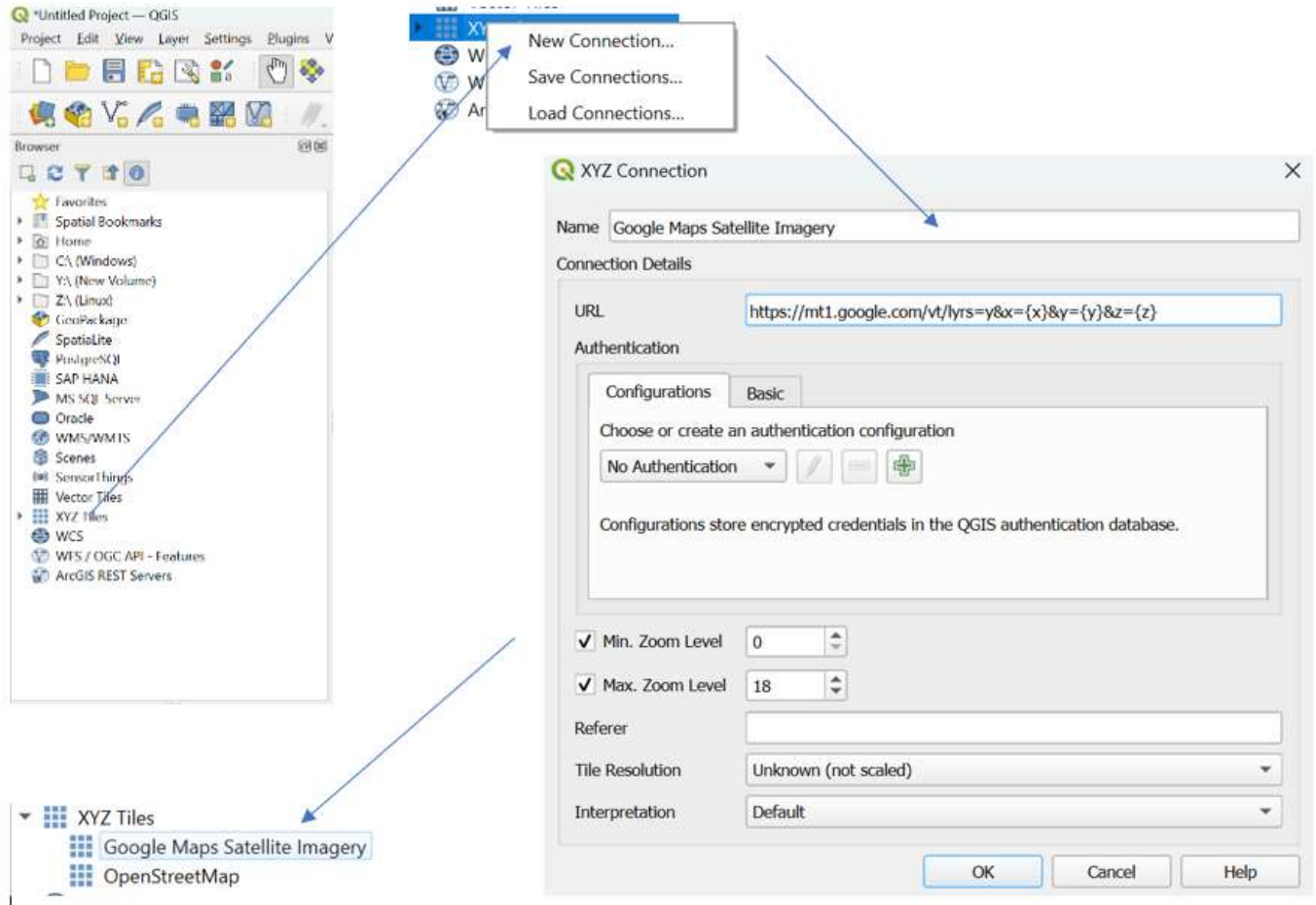
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- 2) Adding Google Maps Satellite imagery as a basemap in QGIS
  - a) Open QGIS and create a new project.
  - b) In the Browser panel, click on the "XYZ Tiles" button.
  - c) In the XYZ Tiles window, right click on the "New Connection" button.
  - d) In the "New XYZ Connection" window, enter the following:
    - a. Name: Google Maps Satellite Imagery
    - b. URI : <https://mt1.google.com/vt/lyrs=y&x={x}&y={y}&z={z}>
  - e) Click "OK" to save the connection.

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- f) Double click on item "Google Maps Satellite Imagery" from the list of connections In the XYZ Tiles window.

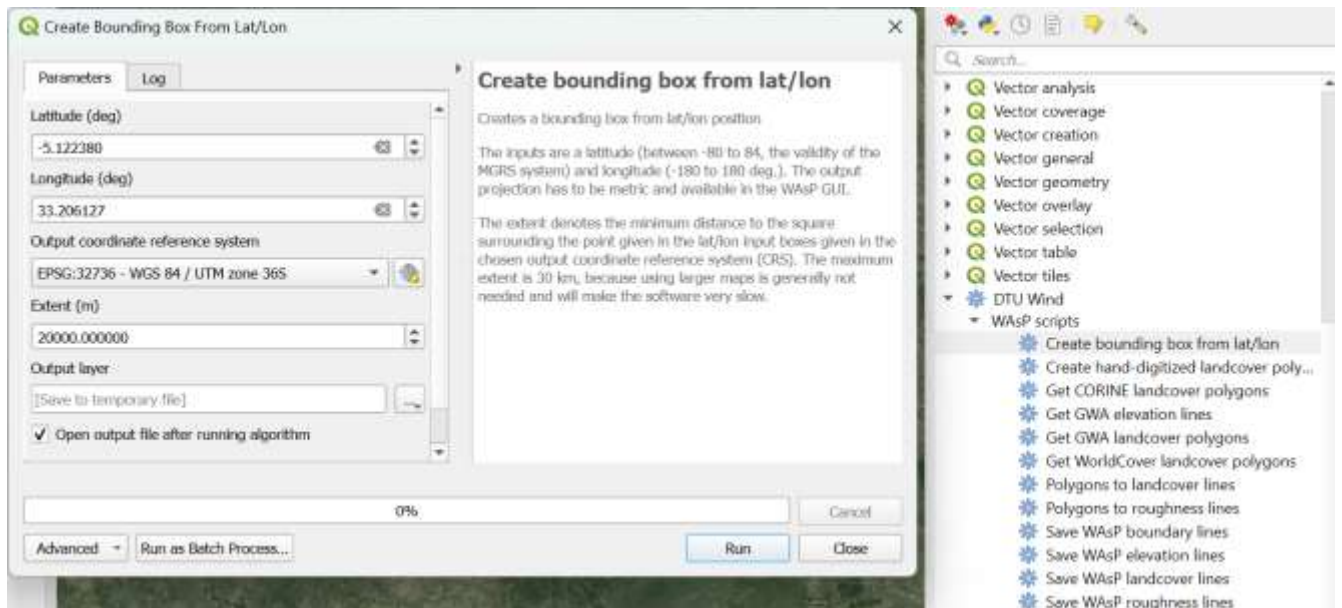


- 3) Go to Processing > Toolbox > Click Toolbox. Make sure the WAsP scripts are available by expanding the 'DTU Wind' entry.

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- 4) Double Click on *Create bounding box from lat/lon*. Enter the centre point coordinates of the location of interest and select the output coordinate system accordingly. Enter in the *Extent(m)* how much extend the polygon should extend. This will create a square polygon around the given lat/lon with the given extent called *Bounding box*. Click Run and Click Close.

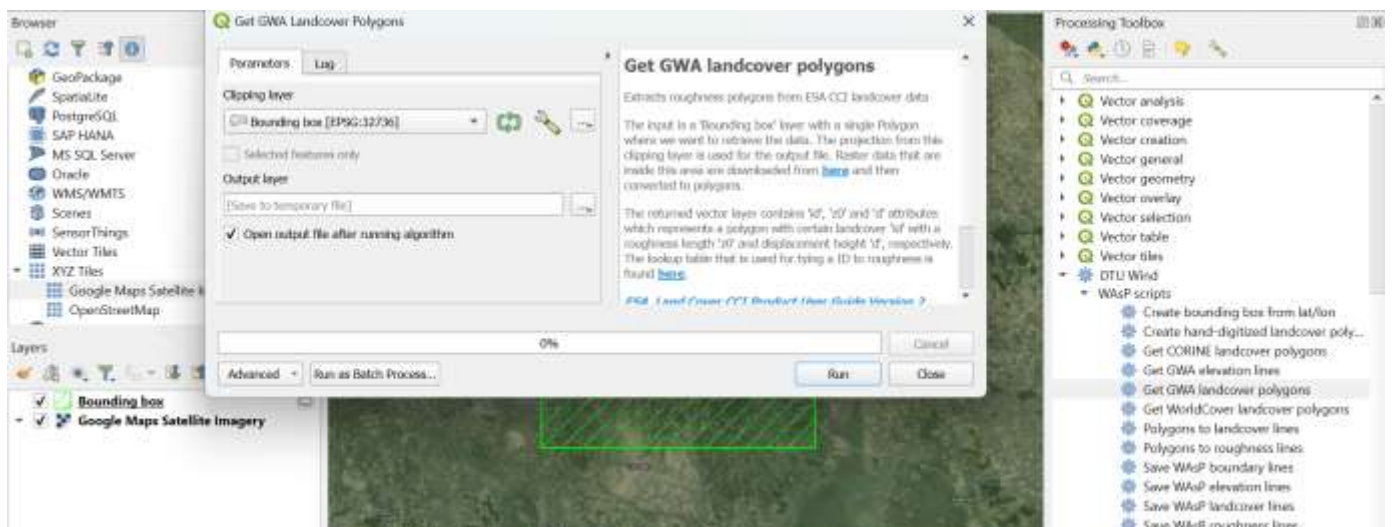


This will create a bounding box as shown in the below image.

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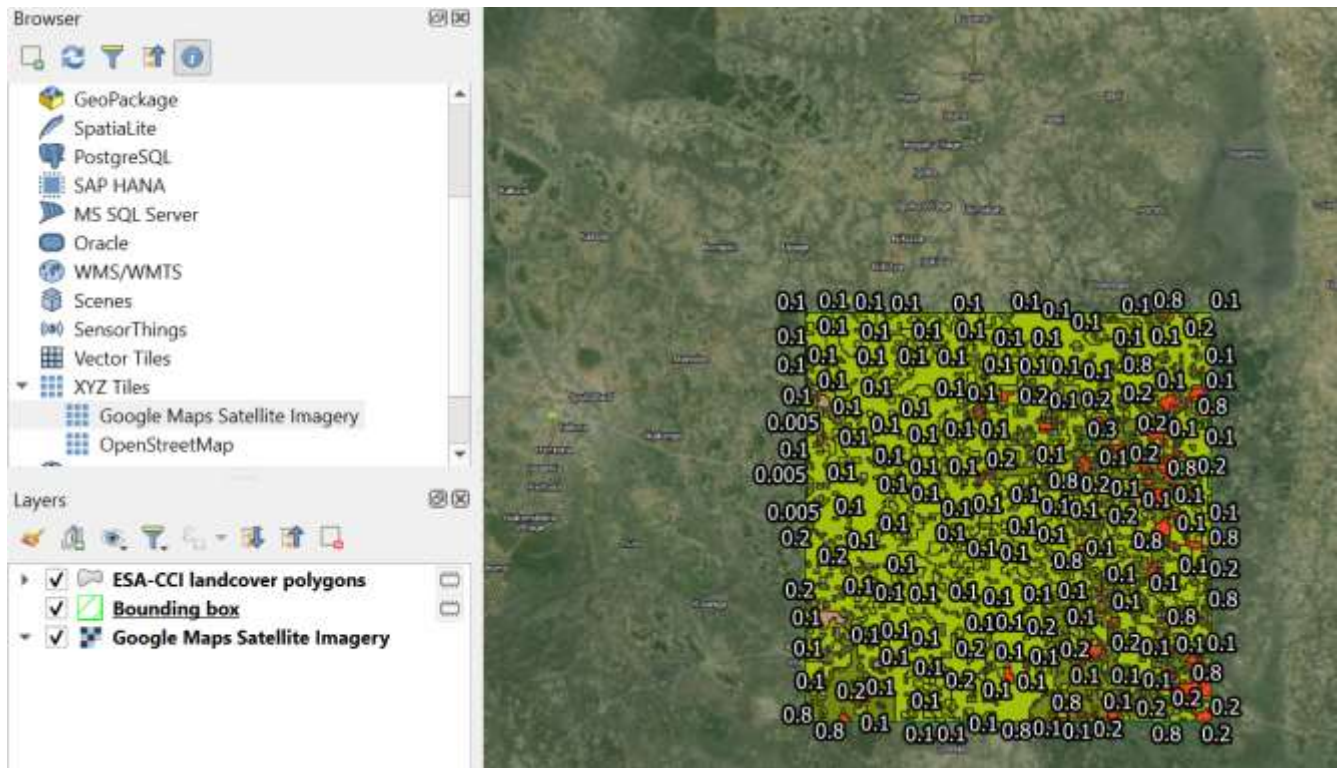


5) Double click the script "Get GWA landcover polygons" Select the Bounding box layer that was already created. Click Run. Once complete, click close.

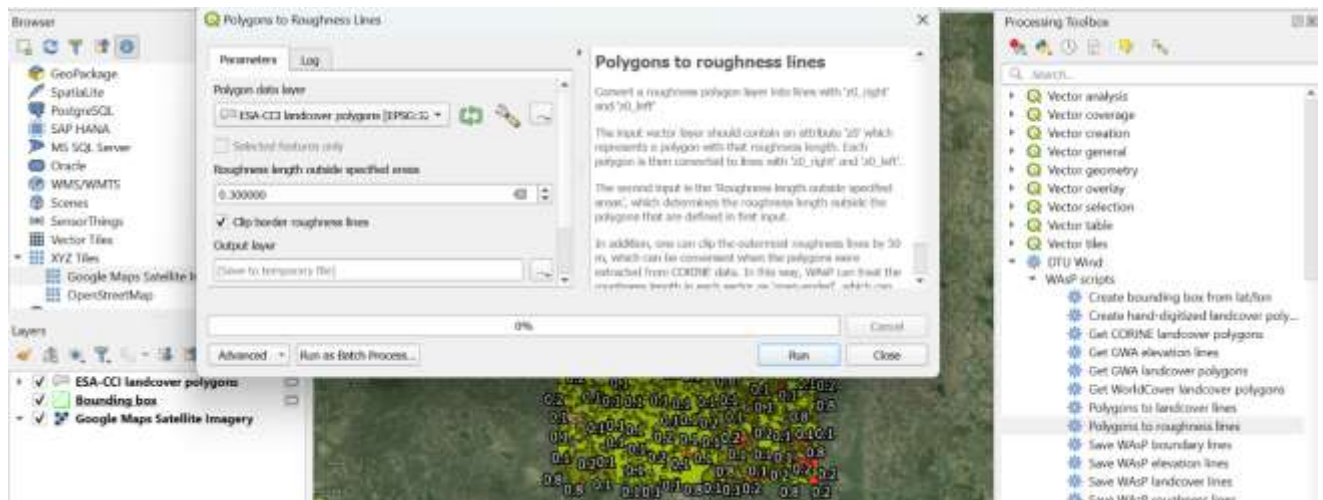


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Once GWA land cover polygons are downloaded. It will look like below inside QGIS. There will be a new layer in the Layers.

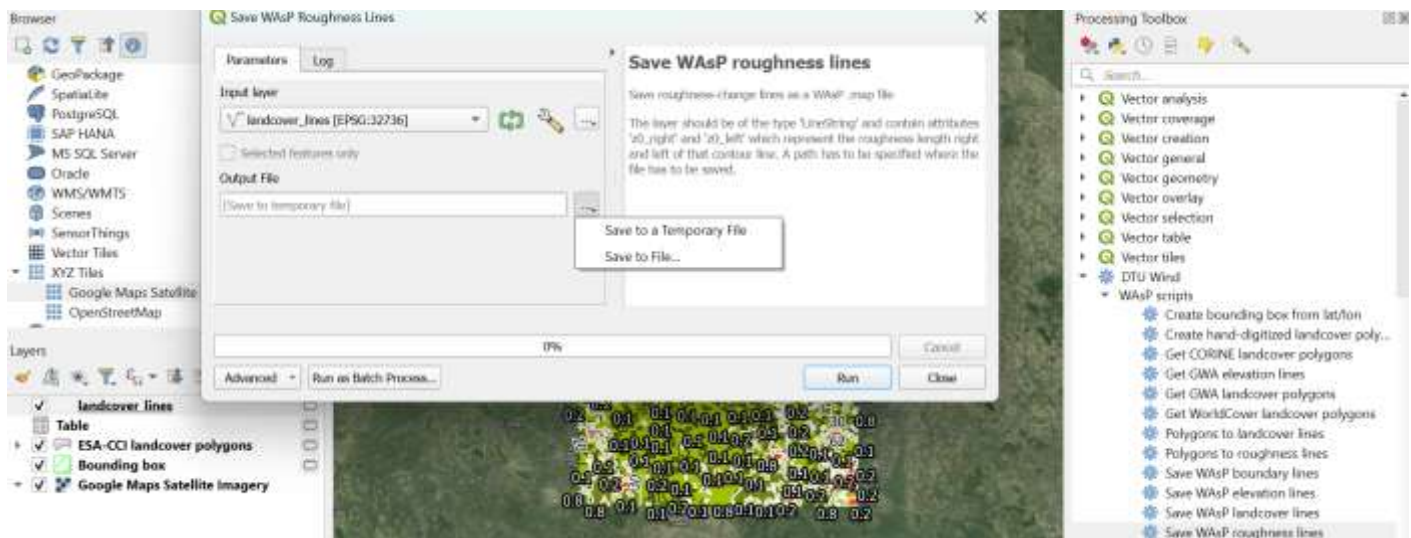


- 6) Double click the script "Polygons to roughness lines". Make sure to check the option 'Clip border roughness lines' is checked, so that the map has 'open ends. Select *ESA-CCI landcover polygons* as Polygon data layer. Select a suitable roughness length for outside specified area and Click Run. A new layer will appear in Layers as *landcover lines*,



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- 7) In the WAsP scripts double click "Save WAsP roughness lines". For the input layer select the roughness lines and click Save three dots under Output File. Then select *Save to File*..... Save the file the disk to use later.



- 8) Open Continuum file. Click "Import Land Cover / Roughness data" and "select roughness contours (.MAP)". Import the saved roughness .map file in the above step.

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