

You are given two data files, “Cooling Type and Source for US Plants” and “US Plants with Latitude and Longitude”. The goal of this task is to use the [Google Maps API](#) to get satellite imagery of US plants with known cooling types.

For this, write a Python script that does the following:

1. Create a folder for each known cooling type (Recirculating, Once through cooling, ...).
2. Use the “Cooling Type and Source for US Plants” data set to find the cooling type for plants.
3. Use the unique “Plant code” as an identifier for power plants to find the geographic lat/long information in the “US Plants with Latitude and Longitude” file.
4. Use the [Google Maps API](#) (SATELLITE IMAGERY under “Demos and sample code” section) to find satellite images of the plants with the lat/long information obtained in step 3 as center coordinates.
5. Save the images obtained in step 4 in the folder of the corresponding cooling type.

A few guidelines:

Save the images as .jpg, .png or .gif in the form PowerPlantName_lat,long.png

For the Maps API request, use zoom level 16 and size 640x640.

Save only one image per plant and cooling type. If a plant has multiple units with different cooling types, save the image of the plant in each cooling type folder but add multipleCT_ (for multiple Cooling Types) in the plant name before lat,long: PowerPlantName_multipleCT_lat,long.png

E.g. the power plant named “Barry” with Plant Code 3 has two units with “Once through cooling” and two units with “Recirculating” cooling type. Thus, save the satellite image of the plant once in each of the folders with the “multipleCT” identifier in the name.

Do not save multiple images of the same plant with the same cooling type for different units, only one image per plant code and cooling type.

You do not actually have to run the script to download all of the pictures, since these would be thousands of pictures, but your code should be capable of doing that. For testing purposes, it is enough if you run your code to download 5-10 images per cooling type and save them in the right folder.

Please make your code easily readable by using self-explaining variable and function names and providing commentary for your code.

Happy Coding!