

Geocoding Assignment

Write a function that gets geolocation data for a given address. The function signature should be:

```
get_geolocation_data(address_string,country)
```

And the function should return a JSON string containing the list:

```
[(formatted_address1,lat1,lng1), (formatted_address2,lat2,lng2), .....]
```

and `None` if Google does not return any data.

Parameters:

region bias: Your code should return data only for addresses that are in the specified country. The google API uses region biasing (if your IP is in the US, you'll get mainly – but not necessarily all – US addresses). Adding a “region” parameter will bias your results to a particular region. Examples of region parameters are “US”, “UK”, “ES” (regions, hopefully, obvious!). Though you can add UK, US, ES to the address parameter of the API, you must use the region code in your API call because adding the country code in the address line is unreliable when working with non-street addresses. Note that the region code often corresponds to the short name of the country but sometimes (e.g., the region code for Great Britain is GB but the region code is UK). A list of all region codes is available at <https://developers.google.com/maps/coverage>

narrowing your results: Because region biasing only biases the results, you still need to filter the results to make sure that your list only contains addresses in the required country. To do this, look at the `address_components` key in each result. The value associated with this key is a list. Each component of this list is a dictionary with three keys. Look for the component (you will need to use a loop) that contains “country” in the list that is the value of the key “types”. For now, we'll use the `short_name` of the country as a synonym for the country.

key: Google uses API keys to monitor API usage. You can use the geocoding API without a key but you will, most likely, get back very few (perhaps just one) results. So get an API key from google. Getting an API key is easy, follow the instructions at <https://developers.google.com/maps/documentation/geocoding/start#get-a-key>

documentation: If you're interested in playing around with the geocoding API (for example, you might want to try [reverse geocoding](#)), documentation is at <https://developers.google.com/maps/documentation/geocoding/start>

An example instance of the API url is:
[https://maps.googleapis.com/maps/api/geocode/json?
key=INSERT_YOUR_KEY_HERE&address=High_Street®ion=uk](https://maps.googleapis.com/maps/api/geocode/json?key=INSERT_YOUR_KEY_HERE&address=High_Street®ion=uk)

For example, the function call:

```
get_geolocation_data("Prada",country='Spain',format='json')
```

should return the string:

```
'[["32368 Prada, Ourense, Spain", 42.3167931, -7.027666399999999],  
["15980 Prada, A Coru\u00f1a, Spain", 42.79248, -8.6569646], ["33128  
Prada, Asturias, Spain", 43.4516015, -6.1866891], ["27877 Prada, Lugo,  
Spain", 43.7077874, -7.5419874], ["33889 Prada, Asturias, Spain",  
43.2382694, -6.6279789]]'
```