**Assignment 4 – Web services**

### General Instructions:

The assignment should be performed **independently** – no collaborations are allowed.

**Late submission** will lead to a reduction in your grade – 5 points per day.

Assignment will written in a **Jupyter Notebook** (.IPYNB file), which will be uploaded to **GitHub**.

In the course’s Moodle you should go to the assignment activity and upload a text file, named:

hw-<id>.txt, where <id> is your ID number. The file should contain the URL of your repository, for example: [https://github.com/israel\_israeli/*DS\_Intro\_HW\_4*](https://github.com/israel_israeli/DS_Intro_HW_4)

### Tasks

1. Attached is a text file that includes a list of destinations (cities in the world). You must write a Python code that goes over the destinations in the file and for each destination contact the Googleapis distancematrix service and retrieve:
   * The distance between the city of Jerusalem and the destination in kilometers
   * The time it takes to reach the destination in minutes.

In addition, you must contact the Google geocode service and retrieve it

* + The longitude and latitude of the target

The information should be stored in a dictionary, where the keys are the destinations names and the values are tuples - each containing information in the following order:

1. Distance of the destination from Jerusalem in kilometers.
2. Arrival time from Jerusalem to the destination in hours and minutes.
3. Longitude of the destination
4. Latitude of the destination

On a separate cell, print the information on the screen clearly for each destination, feel free to do so as you wish, as long as it is clear.

On a separate cell, for the dictionary you created above: Find the 3 cities furthest from Jerusalem.

Good luck!