**Assignment 3 – 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\_3*](https://github.com/israel_israeli/DS_Intro_HW_3)

### Tasks

1. Attached is a text file (dests.txt) 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 Tel Aviv 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:

* + The longitude and latitude of the target

The information should be stored in a dataframe of the following structure:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Target | Distance\_km | Duration (hour+minutes) | Longitude | latitude |
|  |  |  |  |  |
|  |  |  |  |  |

On a separate cell, print the dataframe content.

On a separate cell, for the dataframe you created above: Find the 3 cities furthest from Tel Aviv.

Good luck!