

## Familiarity with informed searches

### Explanation of the assignment question

Suppose we want to travel from one Iranian city center to another Iranian city center and we want to find a sequence of cities that cover the **shortest distance** from the origin to the destination.

Write a program in Python and show the provincial centers that should be visited in order and the length of the route found by your algorithm.

To do this, use the \* A search algorithm.

You can choose the city of origin and destination in your code.

The distance between the centers of the provinces is given in the file **ProvinceCenterDistances.xlsx** along with this assignment in the system.

In order to implement the algorithm, it is necessary to specify the provincial centers that are neighbors to each other, and the distance given in the excel file is written regardless of the fact that the centers of the provinces are neighbors to each other.

To find a straight line between two cities, use the Google Map website, by right-clicking on any provincial center and selecting the option Measure distance.