Python

Flights search

# PROBLEM: Find my flight

The new airline company named: "Viajes el Halcón" is offering low-cost flights to travel through different Italian cities. For this, the company manages some flights from and to some of the most important Italian cities, even if it does not cover all of them, nor all the airports in the different cities.

The set of fight information is provided in a Comma Separated Values file (CSV) named "flights.txt". The file contains all the company flights for a single day. Every line of the file contains the following information:

<flight\_code>,<departure\_time>,<departure\_city>,<arrival\_time>,<arrival\_city>,<track\_cost>

where:

- <flight\_code> an identification code for any flight

- <departure\_time> is a time string in the form: HH:MM, with HH hours from 00 to 23, MM minutes from 00 to 59

- <departure\_city> is the departure city written in capital letters

- <arrival\_time> is a time string in the form: HH:MM, with HH hours from 00 to 23, MM minutes from 00 to 59

- <arrival\_city> is the arrival city written in capital letters

- <track\_cost> is an integer value showing the track cost in Euros

for example:

VEH0101,06:10,MILAN,08:00,PALERMO,15

the flight VEH0101 takes off at 6:10 from Milan and lands at 8:00 in Palermo.

The number of lines in the file is unknown, and the information has no errors.

You are asked to write a Python program able to find all the possibilities to fly from an initial city to an arrival one including at most one additional stop in a different city.

The proposed solutions must depart the same day of the flight, assuming a minimum stop time for changing the flight of 30 minutes.

**The program must ask the user for a departure and an arrival city and print out the available direct flights and the 1 stop options indicating the total cost of the travel and the total time.**

# Example

for example, assuming this as a part of the flights file:

## File `flightList.txt`

VEH0101,06:10,MILAN,08:00,PALERMO,15

VEH0221,06:15,CAGLIARI,07:30,CATANIA,29

VEH0022,06:15,TORINO,08:12,CATANIA,33

VEH0123,06:30,ROME,07:55,TORINO,29

VEH0224,07:55,MILAN,09:30,NAPLES,23

...

VEH0433,12:35,MILAN,15:10,BARI,32

VEH0024,13:00,TORINO,14:30,CAGLIARI,32

VEH0525,13:55,ROME,15:00,PALERMO,33

VEH0726,14:05,CATANIA,15:10,NAPLES,33

VEH0927,15:10,TORINO,16:57,PALERMO,23

VEH0028,15:15,PALERMO,16:55,TORINO,34

VEH0129,16:00,ROME,17:05,BARI,31

VEH0330,16:15,CATANIA,18:10,MILAN,31

VEH0431,17:00,ROME,18:25,MILAN,37

VEH0532,18:15,BARI,19:40,MILAN,44

VEH0633,19:00,PALERMO,20:35,MILAN,29

VEH0734,20:00,NAPLES,21:20,MILAN,34

VEH0835,20:15,CATANIA,22:12,TORINO,22

VEH0036,20:15,BARI,21:55,TORINO,23

VEH0937,21:15,CATANIA,23:30,CAGLIARI,28

VEH0138,21:55,NAPLES,23:10,CAGLIARI,43

VEH0839,22:05,CAGLIARI,23:20,NAPLES,42

if the user departs from TORINO to CAGLIARI, the program must print:

Direct flights:

VEH0024 13:00 TORINO -> 14:30 CAGLIARI

Traveling Time: 01:30

Cost: 32

1 Stop Option 1

VEH0022 06:15 TORINO -> 08:12 CATANIA

VEH0937 21:15 CATANIA -> 23:30 CAGLIARI

Traveling Time: 17:15

Cost: 61

1 Stop Option 2

VEH0844 10:55 TORINO -> 12:26 NAPLES

VEH0138 21:55 NAPLES -> 23:10 CAGLIARI

Traveling Time: 12:15

Cost: 78

FILES

flightList.txt