EXERCISE

You want to create a Python program that calculates and prints on the screen **the number of locations that have been visited by two robots.**

The file ` **`trajectories.txt`** ` contains the description of the paths followed by a set of intelligent micro-robots free to move in a discrete plane of size **10x10.**

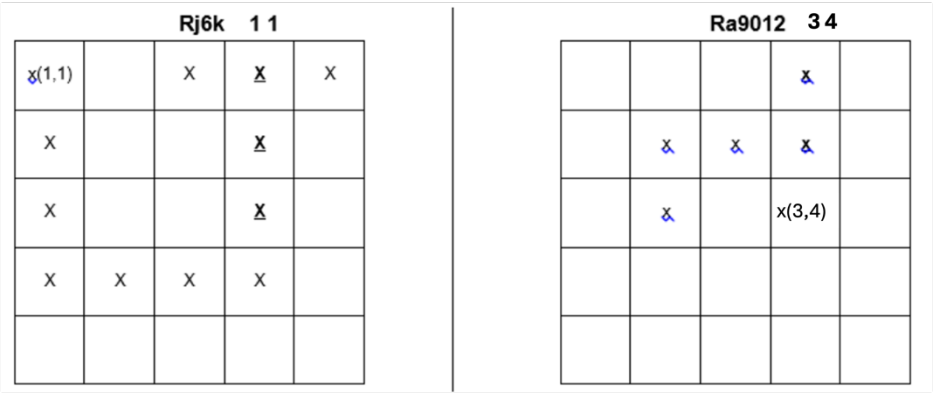
Each line of the file describes the path of one micro-robot. More precisely, each line specifies:

- the name of the robot
- the coordinates x y of its starting point
- the sequence of **movements** performed by the robot.

The four pieces of information (name x y sequence) are separated by a space. Names cannot contain spaces internally.

Possible movements are limited to a **unit increment or decrement in the horizontal or vertical direction**; in the file each movement is identified by a pair of symbols encoded as follows: the '+' sign identifies an increment, the '-' sign identifies a decrement, the 'h' character identifies a horizontal movement, the 'v' character a vertical movement. Note that the sequence of symbols does not contain spaces.

The following example refers to 2 lines of the file ` **`trajectories.txt`** ` in which the micro-robots, identified by the names **`Rj6k`** and **`Ra9012`**, move in space (shown as a 5x5 grid instead of 10x10 for ease of visualization) following the trajectory represented in the figure. The starting points are at the coordinates (1,1) and (3,4). The box in the top left has coordinates (1,1).



Please note that:

- The same micro-robot can visit the same location multiple times (see example above)
- Different micro-robots can visit the same locations
- Micro-robots can follow paths of different lengths
- **All the described trajectories are correctly contained in the NxN plane, so it is not necessary to verify their correctness**
- The file format is always correct

Write a program that asks the user for the names of two robots, and prints on the screen the **number of boxes that have been visited by both robots**.

Example

As an example, consider the following file `trajectories.txt` which describes the trajectories of several robots

```
Raz01 3 2 -h-v+h+h
Ra9012 3 4 -v-v+v-h-h+v
Rj6k 1 1 +v+v+v+h+h+h-v-v-v-h+h+h
Rq12a 2 2 -v-h+v+h-v+h+v-h
```