akuna capital

Quant Dev #2 - Winter 2017

01h : 59m : 15s
to test end

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☆ Drone Delivery

You have been hired as a consultant to MegaCorp to help rollout their new drone delivery service. The new drone delivery service promises to provide its customers with faster delivery of purchased items. MegaCorp has selected SimpleTown USA as the pilot location for testing the new drone delivery service.
SimpleTown USA has unique properties that make it an attractive location to pilot the drone delivery service:

- Planners for SimpleTown constructed homes on multiple identical grids throughout the town.
- Each grid contains exactly 50 homes and each grid was assigned a unique number.
- Each home within a grid was uniquely numbered from 1 to 50.

With these properties, MegaCorp realized that each home within SimpleTown can be uniquely identified by its grid number and home number pair (grid-home).
MegaCorp has designed a simple algorithm for the initial rollout of the drone delivery service:

- A swarm of delivery drones will be deployed for the delivery.
- In each swarm there will be one drone for each unique housing grid that will receive deliveries.
- Each drone will start at home number 1 in the grid and advance until all deliveries for its grid are complete
- Over the period of 1 minute each drone can move to the next house, can make a delivery or can stay at its current home.
- Finally, all products must be delivered in exact order in which the order was made or the entire town of SimpleTown will stop shopping at MegaCorp.

Your task is to determine how long it will take a swarm of drones to complete a specified delivery.
For example, let's consider the following delivery sequence:

1234-1, 1235-1, 1235-3, 1234-2

From the above sequence there are two housing grids, 1234 and 1235, and two homes to deliver to on each grid.
The swarm will perform the following tasks in order to deliver the products:

2	Move to Home 2	Deliver Product
3	Wait at Home 2	Move to Home 2
4	Wait at Home 2	Move to Home 3
5	Wait at Home 2	Deliver Product
6	Deliver Product	Wait at Home 3

It will take a total of 6 minutes to complete this delivery task.

To simplify the initial pilot, MegaCorp has limited a swarm to contains at most two drones. For each test case you will be given the total number of packages to deliver and the sequence of deliveries to make.

YOUR ANSWER

We recommend you take a quick tour of our editor before you proceed.
The timer will pause up to 90 seconds for the tour. Start tour

Original code | Python 2

```
#!/bin/python

import sys
import os



# Complete the function below.


def  time_to_deliver(num_packages, delivery_sequence):



```

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```
13 ▸ f = open(os.environ['OUTPUT_PATH'], 'w')↔
15
16  _num_packages = int(raw_input());
17
18
19  _delivery_sequence_cnt = 0
20  _delivery_sequence_cnt = int(raw_input())
21  _delivery_sequence_i=0
22  _delivery_sequence = []
23 ▾ while _delivery_sequence_i < _delivery_sequence_cnt:
24      _delivery_sequence_item = raw_input()
25      _delivery_sequence.append(_delivery_sequence_item)
26      _delivery_sequence_i+=1
27
28
29  res = time_to_deliver(_num_packages, _delivery_sequence);
30  f.write(str(res) + "\n")
31
32  f.close()
33
```

Line: 8 Col: 1

Test against custom input

Run Code

Submit code & Continue

(You can submit any number of times)

Download sample test cases *The input/output files have Unix line endings. Do not use Notepad to edit them on windows.*