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Test Name: Mock Test

Taken On: 14 Jun 2023 19:53:23 IST

Time Taken: 21 min 40 sec/ 33 min

Invited by: Ankush

Invited on: 14 Jun 2023 19:53:09 IST

Skills Score:

Tags Score:

Algorithms 120/120

Core CS 120/120

Data Structures 120/120

Queues 120/120

100%

120/120

scored in **Mock Test** in 21 min
40 sec on 14 Jun 2023 19:53:23
IST

Recruiter/Team Comments:

No Comments.

	Question Description	Time Taken	Score	Status
Q1	Truck Tour > Coding	21 min 29 sec	120/ 120	✓

QUESTION 1

✓

Correct Answer

Score 120

Truck Tour > Coding

AlgorithmsData StructuresQueuesCore CS

QUESTION DESCRIPTION

Suppose there is a circle. There are N petrol pumps on that circle. Petrol pumps are numbered 0 to $(N - 1)$ (both inclusive). You have two pieces of information corresponding to each of the petrol pump: (1) the amount of petrol that particular petrol pump will give, and (2) the distance from that petrol pump to the next petrol pump.

Initially, you have a tank of infinite capacity carrying no petrol. You can start the tour at any of the petrol pumps. Calculate the first point from where the truck will be able to complete the circle. Consider that the truck will stop at each of the petrol pumps. The truck will move one kilometer for each litre of the petrol.

Input Format

The first line will contain the value of N .

The next N lines will contain a pair of integers each, i.e. the amount of petrol that petrol pump will give and the distance between that petrol pump and the next petrol pump.

Constraints:

$1 \leq N \leq 10^5$

1 ≤ amount of petrol, distance ≤ 10⁹

Output Format

An integer which will be the smallest index of the petrol pump from which we can start the tour.

Sample Input

```
3
1 5
10 3
3 4
```

Sample Output

```
1
```



Explanation

We can start the tour from the second petrol pump.

CANDIDATE ANSWER

Language used: Python 3

```
1
2 #
3 # Complete the 'truckTour' function below.
4 #
5 # The function is expected to return an INTEGER.
6 # The function accepts 2D_INTEGER_ARRAY petrolpumps as parameter.
7 #
8
9 def truckTour(petrolpumps):
10     # Write your code here
11     result = 0
12     start = [result]
13     # print(petrolpumps)
14     for i in range(len(petrolpumps)):
15         fuel = 0
16         while True:
17             fuel += petrolpumps[start[-1]][0]
18             if fuel >= petrolpumps[start[-1]][1]:
19                 fuel -= petrolpumps[start[-1]][1]
20                 start.append((start[-1] + 1) % len(petrolpumps))
21             else:
22                 break
23
24         if len(start) == len(petrolpumps):
25             # print(start)
26             return start[0]
27     print("ok")
28     result += 1
29     start = [result]
30
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	 Success	0	0.0932 sec	10.7 KB
Testcase 2	Easy	Hidden case	 Success	10	0.092 sec	11.1 KB

Testcase 3	Easy	Hidden case	✔ Success	10	0.086 sec	11 KB
Testcase 4	Easy	Hidden case	✔ Success	10	0.1032 sec	10.8 KB
Testcase 5	Easy	Hidden case	✔ Success	10	2.0571 sec	34.2 KB
Testcase 6	Easy	Hidden case	✔ Success	10	3.049 sec	33.9 KB
Testcase 7	Easy	Hidden case	✔ Success	10	2.7568 sec	34 KB
Testcase 8	Easy	Hidden case	✔ Success	10	1.8791 sec	34.2 KB
Testcase 9	Easy	Hidden case	✔ Success	10	0.6517 sec	34.2 KB
Testcase 10	Easy	Hidden case	✔ Success	10	0.9984 sec	33.8 KB
Testcase 11	Easy	Hidden case	✔ Success	10	1.3419 sec	34.2 KB
Testcase 12	Easy	Hidden case	✔ Success	10	3.9494 sec	33.7 KB
Testcase 13	Easy	Hidden case	✔ Success	10	1.3628 sec	33.8 KB

No Comments

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