Full Name:	Remi Chartier
Email:	remipr.chartier@gmail.com
Test Name:	**Mock Test**
Taken On:	29 Oct 2021 11:31:15 IST
Time Taken:	2 min 32 sec/ 33 min
Contact Number:	+14084751573
Linkedin:	http://www.linkedin.com/in/remichartier
Invited by:	Ankush
Invited on:	29 Oct 2021 11:31:07 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 2 min 32 sec on 29 Oct 2021 11:31:15 IST

Recruiter/Team Comments:

No Comments.

	Question Description	Time Taken	Score	Status
Q1	Truck Tour > **Coding**	2 min 24 sec	120/ 120	✓

QUESTION 1

Correct Answer

Score 120

Truck Tour > Coding

Algorithms | Data Structures | Queues | Core 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:

Constraints:

$1 \leq N \leq 10^5$

$1 \leq \text{amount of petrol, distance} \leq 10^9$

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**

```python
#
# Complete the 'truckTour' function below.
#
# The function is expected to return an INTEGER.
# The function accepts 2D_INTEGER_ARRAY petrolpumps as parameter.
#

def truckTour(petrolpumps):
    # Write your code here
    nb_pumps = len(petrolpumps)
    for start in range(nb_pumps):
        max_pump = start + nb_pumps
        tank = 0
        i = start
        while i < max_pump:
            tank += petrolpumps[i % nb_pumps][0]
            next_pump = petrolpumps[i % nb_pumps][1]
            if tank >= next_pump:
                tank -= next_pump
            else:
                break
            i +=1
        if i == max_pump:
            return start
    return -1


```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.0408 sec	9.39 KB
Testcase 2	Easy	Hidden case	Success	10	0.0447 sec	9.58 KB
Testcase 3	Easy	Hidden case	Success	10	0.0439 sec	9.6 KB

Testcase 3	Easy	Hidden case	Success	10	0.0439 sec	9.6 KB
Testcase 4	Easy	Hidden case	Success	10	0.0489 sec	9.49 KB
Testcase 5	Easy	Hidden case	Success	10	2.7084 sec	29.1 KB
Testcase 6	Easy	Hidden case	Success	10	3.9139 sec	29 KB
Testcase 7	Easy	Hidden case	Success	10	3.3451 sec	29.1 KB
Testcase 8	Easy	Hidden case	Success	10	2.6535 sec	29.1 KB
Testcase 9	Easy	Hidden case	Success	10	0.9587 sec	29 KB
Testcase 10	Easy	Hidden case	Success	10	1.4648 sec	29 KB
Testcase 11	Easy	Hidden case	Success	10	2.0263 sec	29.1 KB
Testcase 12	Easy	Hidden case	Success	10	5.8505 sec	29.1 KB
Testcase 13	Easy	Hidden case	Success	10	1.828 sec	29.1 KB

No Comments

PDF generated at: 29 Oct 2021 06:05:22 UTC