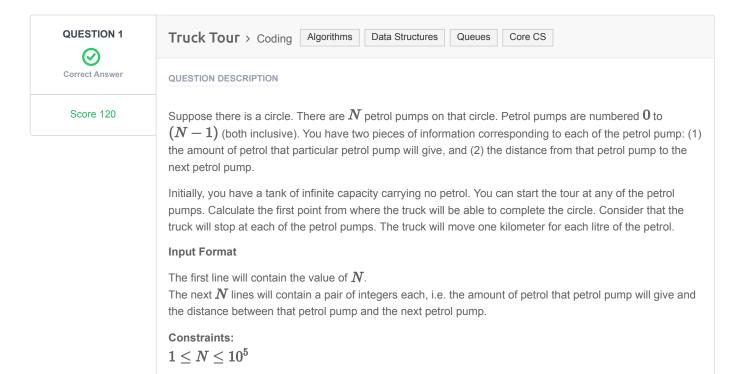|	
Full Name:	Shahar Asher
Email:	shaharas30@gmail.com
Test Name:	**Mock Test**
Taken On:	27 Nov 2024 15:26:31 IST
Time Taken:	15 min 48 sec/ 33 min
Invited by:	Ankush
Invited on:	27 Nov 2024 15:26:19 IST
Skills Score:	
Tags Score:	Algorithms 120/120
	Core CS 120/120
	Data Structures 120/120
	Queues 120/120

100%

120/120

scored in **Mock Test** in 15 min 48 sec on 27 Nov 2024 15:26:31 IST

Recruiter/Team Comments:

No Comments.

	Question Description	Time Taken	Score	Status
Q1	**Truck Tour** › **Coding**	15 min 34 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:
$1 \leq N \leq 10^5$

1/3

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

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: **C++14**

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

int truckTour(vector<vector<int>> petrolpumps) {
    int f = 0, res = 0;
    for(size_t i = 0; i<petrolpumps.size(); ++i) {
        f += (petrolpumps[i][0]-petrolpumps[i][1]);
        if(f<0){
            f=0;
            res = i+1;
        }
    }
    return res;
}
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	✓ Success	0	0.0114 sec	8.9 KB
Testcase 2	Easy	Hidden case	✓ Success	10	0.0102 sec	8.89 KB
Testcase 3	Easy	Hidden case	✓ Success	10	0.0088 sec	9.04 KB
Testcase 4	Easy	Hidden case	✓ Success	10	0.0105 sec	8.96 KB
Testcase 5	Easy	Hidden case	✓ Success	10	0.059 sec	18.8 KB
Testcase 6	Easy	Hidden case	✓ Success	10	0.0967 sec	18.8 KB
Testcase 7	Easy	Hidden case	✓ Success	10	0.0618 sec	18.8 KB
Testcase 8	Easy	Hidden case	✓ Success	10	0.074 sec	18.9 KB
Testcase 9	Easy	Hidden case	✓ Success	10	0.0576 sec	18.9 KB
Testcase 10	Easy	Hidden case	✓ Success	10	0.0573 sec	18.8 KB
Testcase 11	Easy	Hidden case	✓ Success	10	0.058 sec	18.9 KB

| Testcase 12 | Easy | Hidden case | ✓ Success | 10 | 0.0769 sec | 18.9 KB |
| Testcase 13 | Easy | Hidden case | ✓ Success | 10 | 0.0557 sec | 19 KB |

No Comments