

Full Name:

GUILHERME FERNANDES

Email:

contato@guifr.com.br

Test Name:

Mock Test

Taken On:

29 Sep 2022 06:10:08 IST

Time Taken:

13 min 13 sec/ 35 min

Invited by:

Ankush

Invited on:

29 Sep 2022 06:09:58 IST

Skills Score:

Tags Score:

Algorithms 120/120

Core CS 120/120

Data Structures 120/120

Queues 120/120

100%

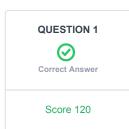
scored in **Mock Test** in 13 min 13 sec on 29 Sep 2022 06:10:08 IST

Recruiter/Team Comments:

No Comments.

Question Description Time Taken Score Status

12 min 57 sec 120/ 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 $oldsymbol{N}$.

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:

 $1 \le N \le 10^5$

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

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: Java 8

```
1 class Result {
 4
        * Complete the 'truckTour' function below.
        ^{\star} The function is expected to return an INTEGER.
       * The function accepts 2D INTEGER ARRAY petrolpumps as parameter.
       * /
       public static int truckTour(List<List<Integer>> petrolpumps) {
           int process = 0;
           int finalIn = 0;
           int sizePumps = petrolpumps.size();
           int consumedGasoline = 0;
           while(process < sizePumps && finalIn < sizePumps) {</pre>
               List<Integer> pump = petrolpumps.get(finalIn);
               System.out.println(pump);
               int gasoline = pump.get(0);
               int distanceNext = pump.get(1);
24
               consumedGasoline += gasoline;
               consumedGasoline -= distanceNext;
               finalIn++;
               while(consumedGasoline < 0 && process < finalIn) {</pre>
                   pump = petrolpumps.get(process);
                   gasoline = pump.get(0);
                   distanceNext = pump.get(1);
                   consumedGasoline -= gasoline;
                   consumedGasoline += distanceNext;
                   process++;
               }
```

```
40
41
              return process;
43
44 }
45
   TESTCASE
                DIFFICULTY
                                  TYPE
                                              STATUS
                                                          SCORE
                                                                     TIME TAKEN
                                                                                    MEMORY USED
                                             Success
                                                              0
                                                                                       29.8 KB
  Testcase 1
                    Easy
                               Sample case
                                                                     0.1465 sec
                                             Success
  Testcase 2
                    Easy
                               Hidden case
                                                             10
                                                                     0.2312 sec
                                                                                       32.6 KB
                                             Success
  Testcase 3
                    Easy
                               Hidden case
                                                             10
                                                                     0.2838 sec
                                                                                       33.3 KB
                                             Success
  Testcase 4
                   Easy
                               Hidden case
                                                             10
                                                                     0.2597 sec
                                                                                       34.4 KB
  Testcase 5
                    Easy
                               Hidden case
                                             Success
                                                             10
                                                                     1.6213 sec
                                                                                       89.6 KB
  Testcase 6
                    Easy
                               Hidden case
                                             Success
                                                                      2.005 sec
                                                                                       87.2 KB
  Testcase 7
                   Easy
                               Hidden case
                                             Success
                                                             10
                                                                     1.8083 sec
                                                                                        94 KB
  Testcase 8
                    Easy
                               Hidden case
                                             Success
                                                             10
                                                                     1.7291 sec
                                                                                       89.1 KB
  Testcase 9
                    Easy
                               Hidden case
                                             Success
                                                             10
                                                                     1.6614 sec
                                                                                       85.7 KB
  Testcase 10
                    Easy
                               Hidden case
                                             Success
                                                             10
                                                                     1.1497 sec
                                                                                       86.7 KB
  Testcase 11
                               Hidden case
                                             Success
                                                                     1.6291 sec
                                                                                       87.4 KB
                    Easy
                                                             10
  Testcase 12
                    Easy
                               Hidden case
                                             Success
                                                             10
                                                                     1.6688 sec
                                                                                       87.7 KB
  Testcase 13
                    Easy
                               Hidden case
                                             Success
                                                             10
                                                                     2.0247 sec
                                                                                       94.2 KB
```

No Comments

PDF generated at: 29 Sep 2022 00:55:13 UTC