Jim and the Orders

by gdisastery

Problem | Submissions | Leaderboard | Discussions | Editorial

Jim's Burgers has n hungry burger fans waiting in line. Each unique order, i, is placed by a customer at time t_i, and the order takes d_i units of time to process.

Given the information for all n orders, can you find and print the order in which all n customers will receive their burgers? If two or more orders are fulfilled at the exact same time t, sort them by ascending order number.

Input Format

The first line contains a single integer, n, denoting the number of orders.
Each of the n subsequent lines contains two space-separated integers describing the respective values of t_i and d_i for order i.

Constraints

- $1 \leq n \leq 10^3$
- $1 \leq i \leq n$
- $1 \leq t_i, d_i \leq 10^6$

Output Format

Print a single line of n space-separated order numbers (recall that orders are numbered from 1 to n) describing the sequence in which the customers receive their burgers. If two or more customers receive their burgers at the same time, print the smallest order number first.

Sample Input 0

```
3
1 3
2 3
3 3
```

Sample Output 0

```
1 2 3
```

Explanation 0

Jim has the following orders:

1. $t_1 = 1, d_1 = 3$. This order is fulfilled at time $t = 1 + 3 = 4$.
2. $t_2 = 2, d_2 = 3$. This order is fulfilled at time $t = 2 + 3 = 5$.
3. $t_3 = 3, d_3 = 3$. This order is fulfilled at time $t = 3 + 3 = 6$.

As you can see, order 1 was fulfilled at time $t = 4$, order 2 was fulfilled at time $t = 5$, and order 3 was fulfilled at time $t = 6$. Thus, we print the sequence of order numbers in the order in which they were fulfilled as `1 2 3`.

Sample Input 1

```
5
8 1
4 2
5 6
3 1
4 3
```

Sample Output 1

```
4 2 5 1 3
```

Explanation 1

Jim has the following orders:

1. $t_1 = 8, d_1 = 1$. This order is fulfilled at time $t = 8 + 1 = 9$.
2. $t_2 = 4, d_2 = 2$. This order is fulfilled at time $t = 4 + 2 = 6$.
3. $t_3 = 5, d_3 = 6$. This order is fulfilled at time $t = 5 + 6 = 11$.
4. $t_4 = 3, d_4 = 1$. This order is fulfilled at time $t = 3 + 1 = 4$.
5. $t_5 = 4, d_4 = 3$. This order is fulfilled at time $t = 4 + 3 = 7$.

When we order these by ascending fulfillment time, we get:

- $t = 4$: order 4.
- $t = 6$: order 2.
- $t = 7$: order 5.
- $t = 9$: order 1.
- $t = 11$: order 3.

We print the ordered numbers in the bulleted listed above as `4 2 5 1 3`.

Note: While not demonstrated in these sample cases, recall that any orders fulfilled at the same time must be listed by ascending order number.

Submissions:15547

Max Score:40
Difficulty: Easy

Rate This Challenge:

More

Current Buffer (saved locally, editable) Java 7

```
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11     }
12 }
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code