Problem C
Baker's Dilemma

Time limit: 3 seconds

Memory limit: 1024 megabytes

Problem Description

A baker has N bakery orders from customers that he must fulfill, but he can only handle one order a day. For the i^{th} order, the baker needs to spend D_i $(1 \leq D_i \leq 1000)$ consecutive days to complete it; however, for every day of delay, the baker must be fined S_i $(1 \leq S_i \leq 1000)$. For example, if the baker receives four orders to make biscuits, the number of days required for each order is 3, 1, 2, 5, and the penalty for each day of delay is 4, 1000, 2, 5. If the baker's work order is 1 2 3 4, the penalty will be $4 \times 0 + 1000 \times 3 + 2 \times 4 + 5 \times 6 = 3038$, but if the work order is 2 1 3 4, the penalty will be $1000 \times 0 + 4 \times 1 + 2 \times 4 + 5 \times 6$. $0 + 4 \times 1 + 2 \times 4 + 5 \times 6 = 42$, so the latter penalty is less. Please write a program to help the baker to find out the sequence of work which has the least penalty.

Input Format

The first line of the input has a positive integer T representing the number of groups of data. After a blank line, there are T groups of data and a blank line separating each group. The first line of each group has an integer N between 1 and 1000 representing the number of orders, followed by N lines, each with two integers separated by a space character, representing the number of days required for each order, D, and the penalty, S, for each day of delay, in that order.

Output Format

For each set of data, output the sequence of jobs with the smallest penalty on one line. Each job is represented by its number, separated by a blank character. If there is more than one set of answers, print the one with the smallest dictionary order. Note that each group of jobs is numbered starting with 1 and separated by a blank line between the outputs of the two groups of data.

Technical Specification

- $1 \leq T \leq 1000$.
- $1 \leq N \leq 1000$.
- $1 \leq D_i \leq 1000, \forall 1 \leq i \leq N$.
- $1 \leq S_i \leq 10000, \forall 1 \leq i \leq N$.

Sample Input 1

```
2

4
3 4
1 1000
2 2
5 5

5
3 4
1 1000
8 8
2 2
5 6
```

Sample Output 1

```
2 1 3 4

2 1 5 3 4
```