homework7.2 Scheduling

Description

A factory has N jobs from customers. The factory can work on only one job each day.

For job i, it will take T_i days to finish. If the factory starts job i not from the first day, then for each day of delay the factory will pay a fine of S_i. Suppose all jobs arrive at day 0.

Implement a method to find a schedule of jobs with minimum total fine.

Can you prove your idea?

Input Format

The first line contains an integer, M ($1 \leq M \leq 10$), which indicates the number of test cases.

Each test case contains three lines:

The first line contains a positive integer, n ($1 \leq n \leq 10^4$), the number of jobs.

The second line contains an array of integers, $T_1, T_2,...T_n$ ($1 \leq T_i \leq 10^5$), finish time of jobs.

The third line contains an array of integers, $S_1, S_2,...S_n$ ($0 \leq S_i \leq 10^5$), per day fine of jobs.

Output Format

For each test case, output the minimum total fine in first line, and output the schedule array, that is, the order of jobs, in next line.

You can suppose the optimal schedule array is unique.

Sample Input	Sample Output
2 3 1 2 2 1 3 4 5	10 3 2 1 503 4 2 5 1 3

10 5 20 3 15 6 7 8 9 10	

Hint