

Toll Management System

You are a traffic engineer working for a city that uses a toll-based system for its roads. The city has multiple intersections connected by directed roads, each with a certain toll based on traffic conditions. The city's traffic control system needs to determine the shortest toll cost between all pairs of intersections. Your job is to develop a system that calculates the shortest toll between all intersections.

Input Format:

- The first line contains a positive integer n , specifying the number of intersections in the city.
- The next n lines contain n space-separated integers representing the toll matrix. Each integer represents the toll for the direct road from one intersection to another:
 - Positive value: Represents the toll cost (in dollars) between two intersections.
 - Negative Value: Represents a reward (negative toll) for traveling on that road. Assume that the input graph has no negative cycles (cycle whose edges sum to a negative value).
 - INF (represented by 9999): Indicates there is no direct road between the intersections.
- The diagonal elements of the matrix are always 0, as traveling from an intersection to itself incurs no cost.

Output Format:

- Print n lines, each containing n space-separated integers. The j^{th} integer in the i^{th} line represents the minimum toll from intersection i to intersection j .

Scenario Constraints:

- The city has up to 100 intersections: $1 \leq n \leq 100$.
- Toll costs between intersections range from -1000 to 1000 or are marked as 9999 if there is no direct road.

Sample Test Cases:

Input 1:

```
4
0 3 9999 7
```

```
8 0 2 9999
5 9999 0 1
2 9999 9999 0
```

Output 1:

```
0 3 5 6
5 0 2 3
3 6 0 1
2 5 7 0
```

Input 2:

```
4
0 1 -2 9999
0 0 1 -3
9999 3 0 9999
4 9999 2 0
```

Output 2:

```
0 1 -2 -2
0 0 -2 -3
3 3 0 0
4 5 2 0
```