Problem: Stolen Treasures

Time limit: 2 seconds
Memory limit: 128 MB

Problem Statement

Pandacity consists of N intersections labeled 1 to N and there are M bi-directional roads connecting the intersections, each connecting different intersections u_i, v_i and has length c_i. Today, someone has stolen Mr. Panda's treasures in Pandacity and drove away with it.

Mr. Panda is furious and decides to take matters into his own hands by conducting his own investigation. The criminal started at some intersection A and drove to some other intersection B but Mr. Panda does not know what these starting and ending intersections are.

However, since the criminal was running away, Mr. Panda knows that the criminal must have taken a shortest route from A to B. The time taken to travel down a road from one intersection to another is directly proportional to the length of the road.

Furthermore, during his investigation, he found pieces of his treasures at S different intersections, which must have fallen out from the criminal's car and so the criminal must have passed through these intersections while traveling from A to B.

Along the route the criminal would not have traveled the same road or crossed the same intersection twice. Now, Mr. Panda needs your help to find one possible route the criminal could have taken.

Input

The first line of input contains two integers, N and M.
Each of the next M lines contains 3 integers u, v, c representing a road from intersection u to intersection v of length c. It is guaranteed that $u \neq v$ and no two roads will connect the same pair of intersections.
The next line contains an integer S. The line after that contains S integers, representing the intersections that Mr. Panda found evidence in and thus the criminal must have passed through.

Output

Find any possible route satisfying the given conditions. Print it in two lines
In the first line print one integer L denoting the number of intersections in the route including the starting and ending intersection.
In the second line print L space-separated integers $P_1, P_2, ..., P_L$ denoting the intersections that the criminal passed through in order where $P_1 = A$ and $P_L = B$ as defined in the problem statement.
If there are multiple correct solutions, you are allowed to output any of them. It is guaranteed that at least one solution exists.

Subtasks

Subtask	Score	N	M	c_i
1	31	$1 \leq N \leq 10^4$	$1 \leq M \leq 10^4$	$1 \leq c_i \leq 10^9$
2	25	$1 \leq N \leq 200000$	$1 \leq M \leq 300000$	$c_i = 1$
3	44	$1 \leq N \leq 200000$	$1 \leq M \leq 300000$	$1 \leq c_i \leq 10^9$

For all test cases, $2 \leq S \leq N, 1 \leq u, v, S_i \leq N$

Sample Input 1

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

Sample Output 1

```
4
1 2 3 6
```

Sample Explanation

The criminal passed through intersections 1 and 6. One possible route is $1 \rightarrow 2 \rightarrow 3 \rightarrow 6$. Another possible solution would be $6 \rightarrow 5 \rightarrow 4 \rightarrow 1$

Sample Input 2

```
9 10
1 2 5
2 4 10
```

```
2 3 4
3 4 4
4 7 5
1 5 10
5 6 10
6 7 10
7 8 10
1 9 10
3
1 7 3
```

Sample Output 2

```
7
8 7 4 3 2 1 9
```

Sample Explanation

The criminal passed through intersections $1, 7, 3$ though not necessarily in that order. The route above is valid because the shortest path from 8 to 9 is of length 38 and the route above is of length 38. Other solutions do exist but any valid solution will be accepted.