Problem I
VisuAlgo Online Quiz

Problem ID: visualgo
CPU Time limit: 2 secor
Memory limit: 1024 ME

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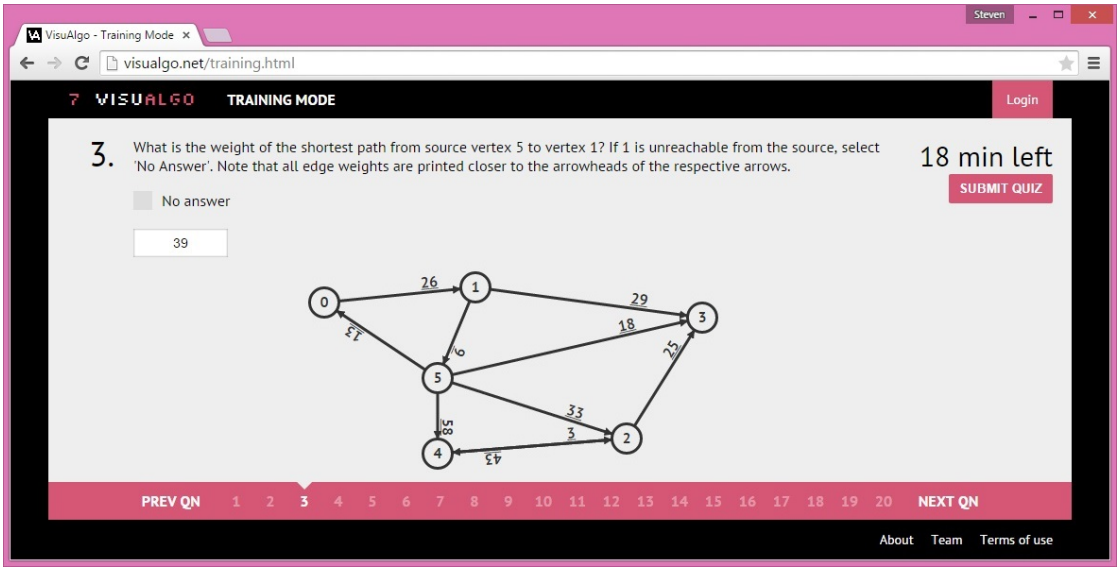

VisuAlgo (http://visualgo.net) is a website developed by a team of staff and students of School of Computing, National University of Singapore, the host of the 2015 ACM-ICPC Asia Singapore Regional. VisuAlgo visualizes a number of popular data structures and algorithms in the Computer Science curriculum. Currently, it receives approximately 2000 hits/day from CS students and instructors worldwide.

One new feature of VisuAlgo is the online quiz. As an example, the above figure shows a question about the classic Single-Source (Single-Destination) Shortest Paths problem in graph theory. The beauty of this online quiz feature is that the question parameters are **randomized**. The drawn graph **G** is taken from a collection of hundreds of directed weighted graphs (with their 2-D layouts) in VisuAlgo's internal database. The graph **G** has V vertices numbered from $[0..V-1]$. The source vertex s and the destination vertex t are selected at random from $[0..V-1]$.

However, such randomization of the question parameters may produce either a trivial question (e.g. "No Answer" when s and t are disconnected, 0 when $s = t$, simple tracing of a path if there is only a single unique path from s to t as shown in the above figure) or insanely difficult question to be computed manually if there are too many possible shortest paths from s to t.

The developers of VisuAlgo want to calibrate such Shortest Paths question with randomized parameters so that it is possible for a normal Computer Science student to answer the randomly generated question manually within a reasonable amount of time. Please help them.

Input

The first line of input contains two non-negative integers $1 \leq V \leq 10\,000$ and $0 \leq E \leq 200\,000$, giving the number of vertices and edges of the drawn graph **G**.

Thereafter follow E lines, each describing the directed weighted edges in **G** by three integers $0 \leq u, v \leq V-1$ and $1 \leq w \leq 99$ (VisuAlgo limits the edge weight to be at most 2 characters for visual aesthetic purpose), where u and v are the vertex numbers and w is the weight of the directed edge $u \rightarrow v$. It is guaranteed that **G** is a simple graph without self-loops or multiple directed edges with the same direction between the same pair of vertices.

Finally, there are two integers in the last line of input $0 \leq s, t \leq V-1$.

Output

Print a line with the number of different shortest paths between s to t in **G**. Two shortest paths p_1 and p_2 are considered different if there exists at least one edge in p_1 that is not found in p_2. It is guaranteed that the answer fits in a 32-bit signed integer data type.

Sample Input 1

```
6 10
0 1 26
1 3 29
1 5 9
2 3 25
2 4 43
4 2 3
5 0 13
5 2 33
5 3 18
5 4 58
5 1
```

Sample Output 1

```
1
```

Sample Input 2

```
7 9
0 1 1
0 2 2
1 2 1
2 3 1
2 4 3
3 4 1
4 5 1
4 6 2
5 6 1
0 6
```

Sample Output 2

```
4
```

Sample Input 3

```
5 6
0 1 1
1 2 2
2 4 3
0 3 3
3 4 4
0 4 6
0 4
```

Sample Output 3

```
2
```