Graph Contest 3 P2 - Shortest Path

Time limit: 0.6s **Memory limit:** 32M

Given a directed graph, find the length of the shortest path from 1 to N.

Input Specification

$N \leq 1\,000$, the number of vertices.
$M \leq 10\,000$, the number of edges. M lines, each with three integers a, b, c $(-100 \leq c \leq 1\,000)$ indicating a **directed** edge from a to b of length c.
Bonus: one case will have edges with negative lengths.
A shortest path will always exist.

Output Specification

The length of the shortest path from vertex 1 to vertex N.

Sample Input

```
3 3
1 2 1
2 3 2
1 3 5
```

Sample Output

```
3
```

Take the path $1 \to 2 \to 3$.