Problem K
Space Routes

Time limit: **3 seconds**
Memory limit: **1024 megabytes**

Problem Description

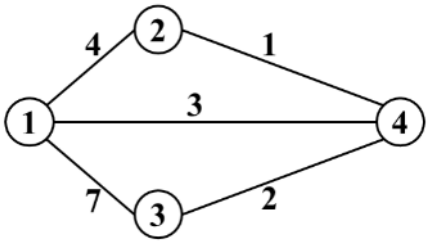
In the world of "Mobile Suit Gundam THE WITCH FROM MERCURY", with the flourish of technology, the environment of the universe cannot restrict human's development and curiosity any more. People can even settle themselves on other planets or space stations. However, there exists gap between rich and poor. The problem of gap between rich and poor causes the compete crisis between residents from different areas in the future.

Miorine Rembran, who is the daughter of a chairman of a business tycoon. *Delling Rembran*, extremely hates her father never cared about her opinions. In order to attract attention from her father, she gathers a group and decides to start a medical equipment company.

In order to publicize a product, the company has to introduce the equipment to all the space stations. Otherwise, no one would like to trust the product is useful. However, since the limited of funds, Miorine will be minimized the spending by the following ways.

1. Before employees depart from any space station, they should select the cheapest tickets. Certainly, the destinations of the tickets cannot be visited by any other employees before.
2. Once employees finish their task in a space station, she will allocate part of employees stay that station. Thus, they might get cheaper tickets from that station to reduce the spending.

For example, there are four space stations and five space routes between theses pace stations. And the numbers indicate the prices of the tickets for the space routes. Assume that the groups initially depart from space station 1. In this case, Miorine will choose the routes (1, 4), (4, 2) and (4, 3), and the minimum cost of tickets is 6.



Please write a program to help Miorine to calculate the minimum cost of the tickets.

Input Format

Input consists of several test cases. The first line of each test case contains two positive integers, n and e, where n indicates the total number of space stations, and e indicates the total number of routes between these n space stations. Each of the next e lines contains three integers, x, y and p, representing the ticket price from station x to station y (also the ticket price from station y to station x) is p. The input is terminated by 'EOF'.

Output Format

For each test case, output the minimum cost on the tickets.

Technical Specification

- $2 \leq n \leq 100$.
- $1 \leq e \leq 200$.
- $1 \leq x, y \leq n$.
- $1 \leq p \leq 100,000$.

Sample Input 1

```
4 5
1 2 4
1 3 7
1 4 3
2 4 1
3 4 2
```

Sample Output 1

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6
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