



Hello, 2024101067.

Maggi Lover

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Akshat

➤ **Problem type**▼ **Allowed languages**

C, C++

Maggi Lover

Bhaskar is eager to eat Maggi in Uttrakhand. Unable to wait any longer, he has decided to travel from Hyderabad to Uttrakhand just to eat Maggi. Your task is to help him find a minimum-price flight route from Hyderabad to Uttrakhand. He has one Felicity discount coupon, using which he can halve the price of any single flight during the route. However, he can only use the coupon once. When he uses the discount coupon for a flight whose price is x , its price becomes $\lfloor x/2 \rfloor$ (it is rounded down to an integer).

Input Format

- The first input line has two integers n and m : the number of locations and flight connections. The locations are numbered $1, 2, \dots, n$. Location 1 is Hyderabad, and location n is Uttrakhand.
- After this there are m lines describing the flights. Each line has three integers a , b , and c : a flight begins at location a , ends at location b , and its price is c . Each flight is unidirectional.
- You can assume that it is always possible to get from Hyderabad to Uttrakhand.

Output Format

- Print one integer: the price of the cheapest route from Hyderabad to Uttrakhand.





Hello, 2024101067.

- $1 \leq a, b \leq n$
- $1 \leq c \leq 10^9$

Sample Test Cases

Input

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

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Output

```
2
```

Copy

Input

```
4 4
4 1 1
1 2 100
2 3 100
3 4 100
```

Copy

Output

```
250
```

Copy

Input

```
4 1
1 4 2
```

Copy

Output

Copy

Hello, **2024101067**.**Explanation for test case 1:**

Bhaskar will go from location 1 to 2 and use coupon for that flight and spend $\lfloor 3/2 \rfloor = 1$. He will again take a flight from location 2 to location 3 and spend 1, thus spending 2 in total.

Explanation for test case 2:

One possible way is that Bhaskar will go from location 1 to 2 and use coupon for that flight and spend $\lfloor 100/2 \rfloor = 50$. He will again take a flight from location 2 to location 3 and spend 100, again take a flight from location 3 to location 4 and spend 100, thus spending 250 in total.

Explanation for test case 3:

Bhaskar will go from location 1 to 4 directly and use coupon for that flight, so he will spend $\lfloor 2/2 \rfloor = 1$.

? Clarifications[Request clarification](#)

No clarifications have been made at this time.