Friends Tour

Varun and Dinesh are good friends . However Varun is working in Hyderabad and Dinesh in Bangalore .

Varun plans to spend his weekend visiting places in Bangalore with Dinesh but he has only T units of free time (Varun is a workaholic).

There are N places in Bangalore , numbered from 1 to N and some of them are connected by one-directional roads . The roads in Bangalore are designed so that there are no circular routes .

Varun and Dinesh start their trip at place 1 and want to end at place N and want to visit the maximum number of places possible spending not more than T units of time .

Can you help them find out the maximum number of places they can visit .

Input

The first line of the input N , M , T (1<=N <= 1e3 , 1 <= M <= 1e5 , 1<=T <= 1e9) denoting the number of places they can visit , number of one-directional roads in Bangalore , Maximum time Varun can spend with Dinesh respectively.

Next M lines contains 3 integers each u , v , w (1<=u<= N ,1<=v<= N , 1<= w<= 100000) denoting that there is a one-directional road from place u to place v and it takes time w units to travel from u to v .

It is guaranteed, that there is at most one road between pair of places .

It is guaranteed there exist at least one way they can reach from place 1 to place n in less than T units of time .

Do not consider time they spend stopping at a place .

Output

Output should contain a single integer denoting the maximum number of places they can visit spending not more than T units of time .

Sample Input

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

Sample Output

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4
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They can visit places 1 , 3 , 4 , 5 since it takes only 5 units of time .