Educational DP Contest AtCoder W - Intervals

Time limit: 1.0s **Memory limit:** 1G

Consider a string of length N consisting of `0` and `1`. The score for the string is calculated as follows:

- For each i $(1 \leq i \leq M)$, a_i is added to the score if the string contains `1` at least once between the l_i-th and r_i-th characters (inclusive).

Find the maximum possible score of a string.

Constraints

- All values in input are integers.
- $1 \leq N \leq 2 \times 10^5$
- $1 \leq M \leq 2 \times 10^5$
- $1 \leq l_i \leq r_i \leq N$
- $|a_i| \leq 10^9$

Input Specification

The first line will contain two integers N and M.

The next M lines will each contain three integers, l_i, r_i, a_i.

Output Specification

Print the maximum possible score of a string.

Sample Input 1

```
5 3
1 3 10
2 4 -10
3 5 10
```

Sample Output 1

```
20
```

Explanation For Sample 1

The score for `10001` is $a_1 + a_3 = 10 + 10 = 20$.

Sample Input 2

```
3 4
1 3 100
1 1 -10
2 2 -20
3 3 -30
```

Sample Output 2

```
90
```

Explanation For Sample 2

The score for `100` is $a_1 + a_2 = 100 + (-10) = 90$.

Sample Input 3

```
1 1
1 1 -10
```

Sample Output 3

```
0
```

Explanation For Sample 3

The score for `0` is 0.

Sample Input 4

```
1 5
1 1 1000000000
1 1 1000000000
1 1 1000000000
1 1 1000000000
1 1 1000000000
```

Sample Output 4

```
5000000000
```

Explanation For Sample 4

The answer may not fit into a 32-bit integer type.

Sample Input 5

```
6 8
5 5 3
1 1 10
1 6 -8
3 6 5
3 4 9
5 5 -2
1 3 -6
4 6 -7
```

Sample Output 5

```
10
```

Explanation For Sample 5

For example, the score for `101000` is $a_2 + a_3 + a_4 + a_5 + a_7 = 10 + (-8) + 5 + 9 + (-6) = 10$.