# **Billboard painting**

### English

#### <u>Vietnamese</u>

A group of K painters has to paint a rectangular billboard of size 1xN. The billboard is divided into N cells of size 1x1. The cells are numbered from 1 to N in left to right order.

The i-th painter  $(1 \le i \le K)$  is currently standing in front of the cell  $S_i$ . He either can paint no cells at all or can paint a consecutive number of cells that must containt the cell  $S_i$ . Moreover, he can only paint at most  $L_i$  cells, and for each painted cell, he will receive a payment of  $P_i$  dollars. Each cell can be painted by at most one person.

Your task is to find a way for the painters to receive the largest amount of payment.

## Input

- The first line of the input contains two positive integers N, K (N  $\leq$  16000; K  $\leq$  100).
- The i-th line of the next K lines contains three positive integers  $L_i$ ,  $P_i$ ,  $S_i$  (i = 1, 2, ... K) separated by spaces (1  $\leq P_i \leq 10000$ , 1  $\leq L_i$ ,  $S_i \leq N$ ). The numbers  $S_1, S_2, \ldots S_K$  are pairwise distinct.

## Output

A single line contains the largest payment that the painters can receive.

## Example

# Output

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The first painter will paint the first two cells, the second painter will paint the next two cells, the third one will paint the remaining cells and the last won't have to paint any cells.