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# Shopee Code League 2022 - Qualification Round

LIVE INVITE ONLY ACCESS

Mar 19, 2022, 03:00 PM SGT - Mar 19, 2022, 06:00 PM SGT

INSTRUCTIONS	PROBLEMS	SUBMISSIONS	LEADERBOARD	ANALYTICS	JUDGE
← Problems / Fireworks	Festival				
Fireworks I	Festival				
Max. score: 100					

Shopee will be hosting a fireworks festival along one of Singapore's main streets. The main street spans across *N* number of roads and the distance between each adjacent road is 1.

The person-in-charge is expected to set off the fireworks for m times, with the i th time (  $1 \le i \le m$  ) being set off at the timing ti along the road ai punctually. If you catch the i th firework at road x

 $(1 \le x \le n)$ , then you will be able to receive bi-|ai-x| amount of free Shopee coins. Note that the amount of Shopee coins may be a negative value.

You are able to move d amount of distance within each unit of time without leaving the main street. Alternatively, you may also pick a random spot along the main street at the beginning of the festival (where time = 1) to maximise your chances of gaining Shopee coins.

Note that the person-in-charge may concurrently set off two or more fireworks at one time.

Your aim is to strategise the best way to receive the highest amount of Shopee coins.

## <u>Input</u>

The first row should feature three integers: n, m, d (  $1 \le n \le 150000$ ;  $1 \le m \le 300$ ;  $1 \le d \le n$  ). For variable m, each row of input should include integers ai, bi, ti (  $1 \le a_i \le n$ ;  $1 \le b_i \le 10^9$ ;  $1 \le t_i \le 10^9$ ). The i th row should feature the respective variables for the i th set off.

Note: It is ensured that the inputs fulfil the criteria of  $ti \le ti + 1$  (  $1 \le i < m$  ).

## Output:

To print an integer of the highest possible amount of Shopee coins.

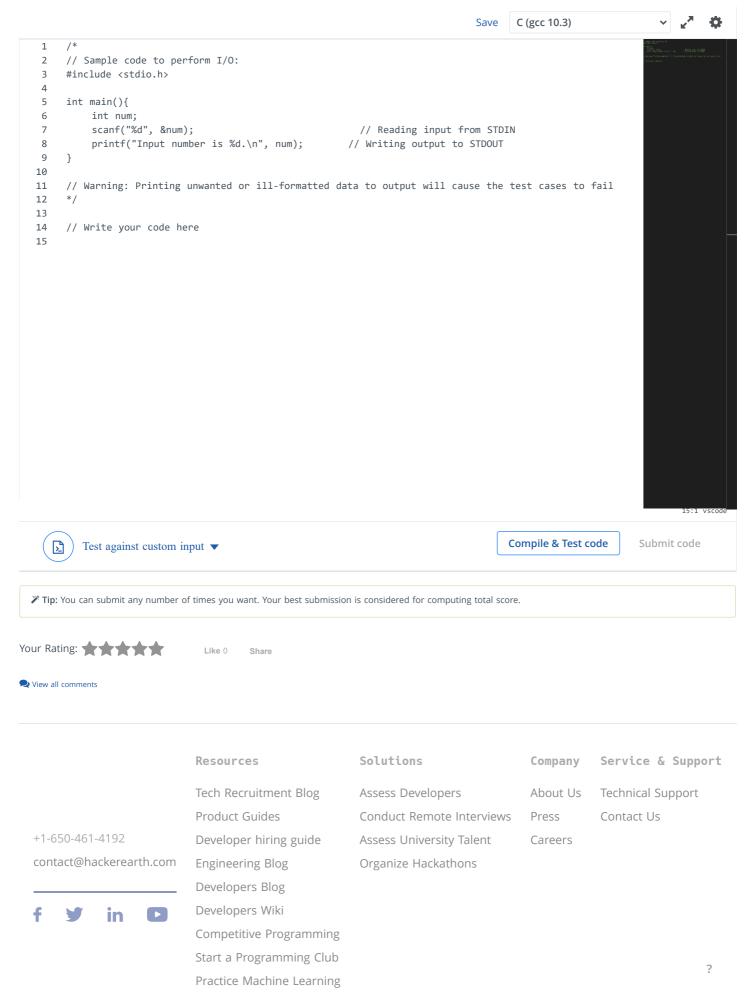
SAMPLE INPUT	<b>% 2</b> 0
10 2 1 1 500 5 9 500 5	
SAMPLE OUTPUT	<b>%</b> €
992	

#### Explanation

## NA

Time Limit:	1.0 sec(s) for each input file.				
Memory Limit:	256 MB				
Source Limit:	1024 KB				
Marking Scheme:	Score is assigned when all the testcases pass.				
Allowed Languages:	Bash, C, C++, C++14, C++17, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, Java 14, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin,				
	Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, Python 3.8, Racket, Ruby, Rust, Scala, Swift-4.1, Swift				
	TypeScript, Visual Basic				

### **CODE EDITOR**



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