

# 2118. Maximum Earnings From Taxi

## Difficulty : Medium

<https://leetcode.com/problems/maximum-earnings-from-taxi>

There are  $n$  points on a road you are driving your taxi on. The  $n$  points on the road are labeled from 1 to  $n$  in the direction you are going, and you want to drive from point 1 to point  $n$  to make money by picking up passengers. You cannot change the direction of the taxi.

The passengers are represented by a **0-indexed** 2D integer array `rides`, where `rides[i] = [starti, endi, tipi]` denotes the  $i^{\text{th}}$  passenger requesting a ride from point `starti` to point `endi` who is willing to give a `tipi` dollar tip.

For **each** passenger  $i$  you pick up, you **earn** `endi - starti + tipi` dollars. You may only drive **at most one** passenger at a time.

Given  $n$  and `rides`, return *the **maximum** number of dollars you can earn by picking up the passengers optimally*.

**Note:** You may drop off a passenger and pick up a different passenger at the same point.

### Example 1:

**Input:** `n = 5, rides = [[2,5,4],[1,5,1]]`

**Output:** 7

**Explanation:** We can pick up passenger 0 to earn `5 - 2 + 4 = 7` dollars.

### Example 2:

**Input:** `n = 20, rides = [[1,6,1],[3,10,2],[10,12,3],[11,12,2],[12,15,2],[13,18,1]]`

**Output:** 20

**Explanation:** We will pick up the following passengers:

- Drive passenger 1 from point 3 to point 10 for a profit of `10 - 3 + 2 = 9` dollars.
  - Drive passenger 2 from point 10 to point 12 for a profit of `12 - 10 + 3 = 5` dollars.
  - Drive passenger 5 from point 13 to point 18 for a profit of `18 - 13 + 1 = 6` dollars.
- We earn `9 + 5 + 6 = 20` dollars in total.

### Constraints:

- $1 \leq n \leq 10^5$
- $1 \leq \text{rides.length} \leq 3 * 10^4$
- `rides[i].length == 3`
- $1 \leq \text{start}_i < \text{end}_i \leq n$
- $1 \leq \text{tip}_i \leq 10^5$