2093. Minimum Cost to Reach City With Discounts Premium

Solved ●

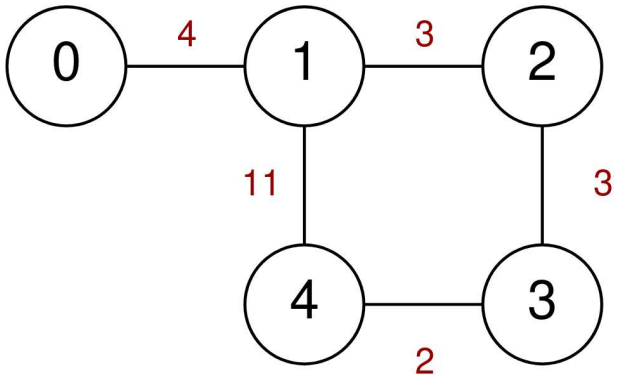
Medium Topics Companies Hint

A series of highways connect `n` cities numbered from `0` to `n - 1`. You are given a 2D integer array `highways` where `highways[i] = [city1ᵢ, city2ᵢ, tollᵢ]` indicates that there is a highway that connects `city1ᵢ` and `city2ᵢ`, allowing a car to go from `city1ᵢ` to `city2ᵢ` **and vice versa** for a cost of `tollᵢ`.

You are also given an integer `discounts` which represents the number of discounts you have. You can use a discount to travel across the `iᵗʰ` highway for a cost of `tollᵢ / 2` (**integer division**). Each discount may only be used **once**, and you can only use at most **one** discount per highway.

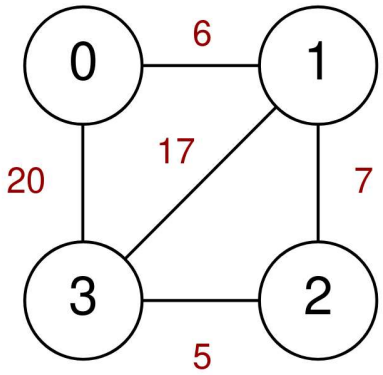
Return *the* ***minimum total cost*** *to go from city* `0` *to city* `n - 1`*, or* `-1` *if it is not possible to go from city* `0` *to city* `n - 1`.

Example 1:



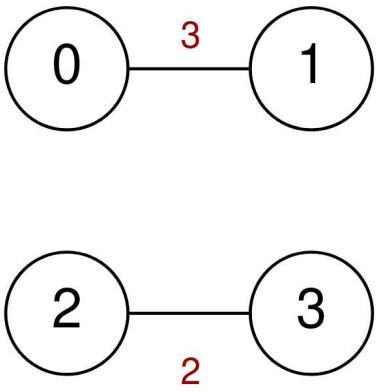
> **Input:** n = 5, highways = [[0,1,4],[2,1,3],[1,4,11],[3,2,3],[3,4,2]], discounts = 1
> **Output:** 9
> **Explanation:**
> Go from 0 to 1 for a cost of 4.
> Go from 1 to 4 and use a discount for a cost of 11 / 2 = 5.
> The minimum cost to go from 0 to 4 is 4 + 5 = 9.

Example 2:



> **Input:** n = 4, highways = [[1,3,17],[1,2,7],[3,2,5],[0,1,6],[3,0,20]], discounts = 20
> **Output:** 8
> **Explanation:**
> Go from 0 to 1 and use a discount for a cost of 6 / 2 = 3.
> Go from 1 to 2 and use a discount for a cost of 7 / 2 = 3.
> Go from 2 to 3 and use a discount for a cost of 5 / 2 = 2.
> The minimum cost to go from 0 to 3 is 3 + 3 + 2 = 8.

Example 3:



> **Input:** n = 4, highways = [[0,1,3],[2,3,2]], discounts = 0
> **Output:** -1
> **Explanation:**
> It is impossible to go from 0 to 3 so return -1.

Constraints:

- $2 <= n <= 1000$
- $1 <= highways.length <= 1000$
- $highways[i].length == 3$
- $0 <= city1_i, city2_i <= n - 1$
- $city1_i != city2_i$
- $0 <= toll_i <= 10^5$
- $0 <= discounts <= 500$
- There are no duplicate highways.

Seen this question in a real interview before? 1/5

Yes No

Accepted **5.5K** Submissions **9.8K** Acceptance Rate **55.7%**

Topics

Companies

Hint 1

Hint 2

Hint 3

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