

6063. Maximum Score of a Node Sequence

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There is an **undirected** graph with  $n$  nodes, numbered from  $0$  to  $n - 1$ .

You are given a **0-indexed** integer array `scores` of length  $n$  where `scores[i]` denotes the score of node  $i$ . You are also given a 2D integer array `edges` where `edges[i] = [ai, bi]` denotes that there exists an **undirected** edge connecting nodes  $a_i$  and  $b_i$ .

A node sequence is **valid** if it meets the following conditions:

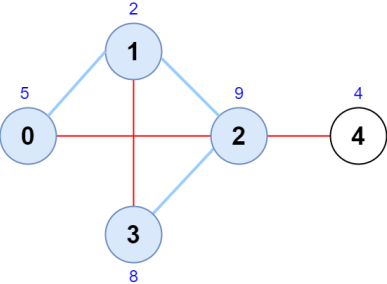
- There is an edge connecting every pair of **adjacent** nodes in the sequence.
- No node appears more than once in the sequence.

The score of a node sequence is defined as the **sum** of the scores of the nodes in the sequence.

Return the **maximum score** of a valid node sequence with a length of  $4$ . If no such sequence exists, return  $-1$ .

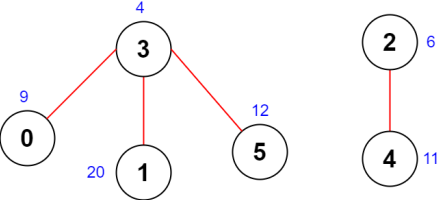
|                    |      |
|--------------------|------|
| User Accepted:     | 0    |
| User Tried:        | 0    |
| Total Accepted:    | 0    |
| Total Submissions: | 0    |
| Difficulty:        | Hard |

Example 1:



**Input:** `scores = [5,2,9,8,4]`, `edges = [[0,1],[1,2],[2,3],[0,2],[1,3],[2,4]]`  
**Output:** 24  
**Explanation:** The figure above shows the graph and the chosen node sequence `[0,1,2,3]`. The score of the node sequence is  $5 + 2 + 9 + 8 = 24$ . It can be shown that no other node sequence has a score of more than 24. Note that the sequences `[3,1,2,0]` and `[1,0,2,3]` are also valid and have a score of 24. The sequence `[0,3,2,4]` is not valid since no edge connects nodes 0 and 3.

Example 2:



**Input:** `scores = [9,20,6,4,11,12]`, `edges = [[0,3],[5,3],[2,4],[1,3]]`  
**Output:** -1  
**Explanation:** The figure above shows the graph. There are no valid node sequences of length 4, so we return -1.

Constraints:

- $n == \text{scores.length}$
- $4 \leq n \leq 5 * 10^4$
- $1 \leq \text{scores}[i] \leq 10^8$
- $0 \leq \text{edges.length} \leq 5 * 10^4$
- $\text{edges}[i].\text{length} == 2$
- $0 \leq a_i, b_i \leq n - 1$
- $a_i \neq b_i$
- There are no duplicate edges.

C++



```
1 class Solution {  
2 public:  
3     int maximumScore(vector<int>& scores, vector<vector<int>>& edges) {  
4  
5     }  
6 };
```

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