

2078. Maximum Compatibility Score Sum

Difficulty : Medium

<https://leetcode.com/problems/maximum-compatibility-score-sum>

There is a survey that consists of n questions where each question's answer is either 0 (no) or 1 (yes).

The survey was given to m students numbered from 0 to $m - 1$ and m mentors numbered from 0 to $m - 1$. The answers of the students are represented by a 2D integer array `students` where `students[i]` is an integer array that contains the answers of the i^{th} student (**0-indexed**). The answers of the mentors are represented by a 2D integer array `mentors` where `mentors[j]` is an integer array that contains the answers of the j^{th} mentor (**0-indexed**).

Each student will be assigned to **one** mentor, and each mentor will have **one** student assigned to them. The **compatibility score** of a student-mentor pair is the number of answers that are the same for both the student and the mentor.

- For example, if the student's answers were `[1, 0, 1]` and the mentor's answers were `[0, 0, 1]`, then their compatibility score is 2 because only the second and the third answers are the same.

You are tasked with finding the optimal student-mentor pairings to **maximize** the **sum of the compatibility scores**.

Given `students` and `mentors`, return *the **maximum compatibility score sum** that can be achieved*.

Example 1:

Input: `students = [[1,1,0],[1,0,1],[0,0,1]]`, `mentors = [[1,0,0],[0,0,1],[1,1,0]]`

Output: 8

Explanation: We assign students to mentors in the following way:

- student 0 to mentor 2 with a compatibility score of 3.
- student 1 to mentor 0 with a compatibility score of 2.
- student 2 to mentor 1 with a compatibility score of 3.

The compatibility score sum is $3 + 2 + 3 = 8$.

Example 2:

Input: `students = [[0,0],[0,0],[0,0]]`, `mentors = [[1,1],[1,1],[1,1]]`

Output: 0

Explanation: The compatibility score of any student-mentor pair is 0.

Constraints:

- $m == \text{students.length} == \text{mentors.length}$
- $n == \text{students}[i].\text{length} == \text{mentors}[j].\text{length}$
- $1 \leq m, n \leq 8$
- `students[i][k]` is either 0 or 1.
- `mentors[j][k]` is either 0 or 1.