Problem 2545: Sort the Students by Their Kth Score

Problem Information

Difficulty: Medium
Acceptance Rate: 85.96%
Paid Only: No
Tags: Array, Sorting, Matrix

Problem Description

There is a class with `m` students and `n` exams. You are given a **0-indexed** `m x n` integer matrix `score`, where each row represents one student and `score[i][j]` denotes the score the `ith` student got in the `jth` exam. The matrix `score` contains **distinct** integers only.

You are also given an integer `k`. Sort the students (i.e., the rows of the matrix) by their scores in the `kth` (**0-indexed**) exam from the highest to the lowest.

Return _the matrix after sorting it._

Example 1:

Input: score = [[10,6,9,1],[7,5,11,2],[4,8,3,15]], k = 2 **Output:** [[7,5,11,2],[10,6,9,1],[4,8,3,15]] **Explanation:** In the above diagram, S denotes the student, while E denotes the exam. - The student with index 1 scored 11 in exam 2, which is the highest score, so they got first place. - The student with index 0 scored 9 in exam 2, which is the second highest score, so they got second place. - The student with index 2 scored 3 in exam 2, which is the lowest score, so they got third place.

Example 2:

Input: score = [[3,4],[5,6]], k = 0 **Output:** [[5,6],[3,4]] **Explanation:** In the above diagram, S denotes the student, while E denotes the exam. - The student with index 1 scored 5 in exam 0, which is the highest score, so they got first place. - The student with index 0 scored 3 in exam 0, which is the lowest score, so they got second place.

Constraints:

* `m == score.length` * `n == score[i].length` * `1 <= m, n <= 250` * `1 <= score[i][j] <= 105` * `score` consists of **distinct** integers. * `0 <= k < n`

Code Snippets

C++:

```cpp
class Solution {
public:
vector<vector<int>> sortTheStudents(vector<vector<int>>& score, int k) {


}
};
```

Java:

```java
class Solution {
public int[][] sortTheStudents(int[][] score, int k) {


}
}
```

Python3:

```python
class Solution:
def sortTheStudents(self, score: List[List[int]], k: int) -> List[List[int]]:
```