

Largest Row Sum in Matrix

You are given a matrix of integers representing the scores of students in various subjects. Each row represents a student, and each column represents a subject. Your task is to calculate the sum of scores for each student and find the row (student) with the largest sum.

In this example, the **largestRowSum** function is called with a 2D matrix representing the scores of students in various subjects. The function calculates the sum of scores for each student and finds the row with the largest sum. It prints the sum of scores for each row and returns the index of the row with the largest sum.

The **largestRowSum** function uses two variables: **rowIndex** to keep track of the index of the row with the largest sum, and **maxi** to store the maximum sum found so far. It iterates over each row, calculating the sum of scores for that row and updating **rowIndex** and **maxi** if a larger sum is found.

Time Complexity:

- The nested loops iterate over each element in the matrix, so the **time complexity is $O(\text{row} * \text{col})$** , where row is the number of rows and col is the number of columns.

Space Complexity:

- **The space complexity is $O(1)$** because no additional space is used that scales with the input size. The space used for the matrix and variables **rowIndex** and **maxi** are constant.