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| **Count Zeroes In Sorted Matrix in C++** | |
| #include <iostream>  #include <vector>  using namespace std;  class CountZerosInASortedMatrix {  public:  static int countZeros(vector<vector<int>>& mat) {  int n = mat.size();  int i = 0;  int j = n - 1;  int countZeros = 0;  while (i < n && j >= 0) {  if (mat[i][j] == 1) {  j--;  } else {  countZeros += j + 1;  i++;  }  }  return countZeros;  }  };  int main() {  // Hardcoded input  int n = 5;  vector<vector<int>> mat = {  {0, 0, 0, 1, 1},  {0, 0, 0, 1, 1},  {0, 0, 1, 1, 1},  {0, 1, 1, 1, 1},  {0, 1, 1, 1, 1}  };  // Call the countZeros method to count zeros  int result = CountZerosInASortedMatrix::countZeros(mat);  // Print the result  cout << "Number of zeros in the sorted matrix: " << result << endl;  return 0;  } | Dry Run Table **Matrix:**  0 0 0 1 1  0 0 0 1 1  0 0 1 1 1  0 1 1 1 1  0 1 1 1 1   | **i** | **j** | **mat[i][j]** | **Action** | **Zeros Count** | | --- | --- | --- | --- | --- | | 0 | 4 | 1 | j-- → 3 | 0 | | 0 | 3 | 1 | j-- → 2 | 0 | | 0 | 2 | 0 | count += 2+1=3, i++ | 3 | | 1 | 2 | 0 | count += 2+1=3, i++ | 6 | | 2 | 2 | 1 | j-- → 1 | 6 | | 2 | 1 | 0 | count += 1+1=2, i++ | 8 | | 3 | 1 | 1 | j-- → 0 | 8 | | 3 | 0 | 0 | count += 0+1=1, i++ | 9 | | 4 | 0 | 0 | count += 0+1=1, i++ | 10 |  ✅ Final Output: Number of zeros in the sorted matrix: 10 |
| Number of zeros in the sorted matrix: 10 | |