

Q).. Leftmost Column with at Least a One

A row-sorted binary matrix means that all elements are 0 or 1 and each row of the matrix is sorted in non-decreasing order.

Given a row-sorted binary matrix `binaryMatrix`, return the index (0-indexed) of the leftmost column with a 1 in it. If such an index does not exist, return -1.

You can't access the Binary Matrix directly. You may only access the matrix using a `BinaryMatrix` interface:

- `BinaryMatrix.get(row, col)` returns the element of the matrix at index (row, col) (0-indexed).
- `BinaryMatrix.dimensions()` returns the dimensions of the matrix as a list of 2 elements [rows, cols], which means the matrix is rows x cols.

Submissions making more than 1000 calls to `BinaryMatrix.get` will be judged Wrong Answer. Also, any solutions that attempt to circumvent the judge will result in disqualification.

For custom testing purposes, the input will be the entire binary matrix `mat`. You will not have access to the binary matrix directly.

Example 1:

Input: mat = [[0,0],[1,1]]

Output: 0

Program:

```
class BinaryMatrix:
    def __init__(self, matrix):
        self.matrix = matrix
    def get(self, row, col):
        return self.matrix[row][col]
    def dimensions(self):
        return [len(self.matrix), len(self.matrix[0])]
def leftmost_column_with_one(binaryMatrix):
    rows, cols = binaryMatrix.dimensions()
    row = 0
    col = cols - 1
    leftmost_col = -1
    while row < rows and col >= 0:
        if binaryMatrix.get(row, col) == 1:
            leftmost_col = col
            col -= 1
        else:
            row += 1
    return leftmost_col
mat = [[0, 0], [1, 1]]
binaryMatrix = BinaryMatrix(mat)
print(leftmost_column_with_one(binaryMatrix))
Output:
```

```
C:\Users\srika\Desktop\CSA0863\pythonProject\.venv\Scripts\python.exe C:\Users\srika\Desktop\CSA0863\pythonProject\problem.py
0

Process finished with exit code 0
```

Time complexity: $O(n+m)$