05/08/2023, 16:35 Coding Ninjas

1.1.1

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Time complexity: O(N*M)
        Space complexity: O(N*M)
        where N and M are the matrix parameters
1.1.1
from sys import stdin
dir = [[1, 0], [-1, 0], [0, 1], [0, -1]]
def valid(x, y, n):
    return (x \ge 0 \text{ and } y \ge 0 \text{ and } x < n \text{ and } y < n)
def __dfs(edge, vis, x, y, n) :
    vis[x][y] = True
    count = 1
    for i in range(4):
        nex = x + dir[i][0]
        ney = y + dir[i][1]
        if(valid(nex, ney, n) and edge[nex][ney] == '1' and vis[nex][ney] == False) :
            count += __dfs(edge, vis, nex, ney, n)
    return count
def dfs(edge, n):
    vis = [[False for i in range(n)] for j in range(n)]
    ans = 0
    for i in range(n):
        for j in range(n):
            if(vis[i][j] == False and edge[i][j] == '1') :
                ans = max(ans, __dfs(edge, vis, i, j, n))
    return ans
# Main
n = int(stdin.readline().strip())
edge = [stdin.readline().strip().split() for i in range(n)]
print(dfs(edge, n))
```