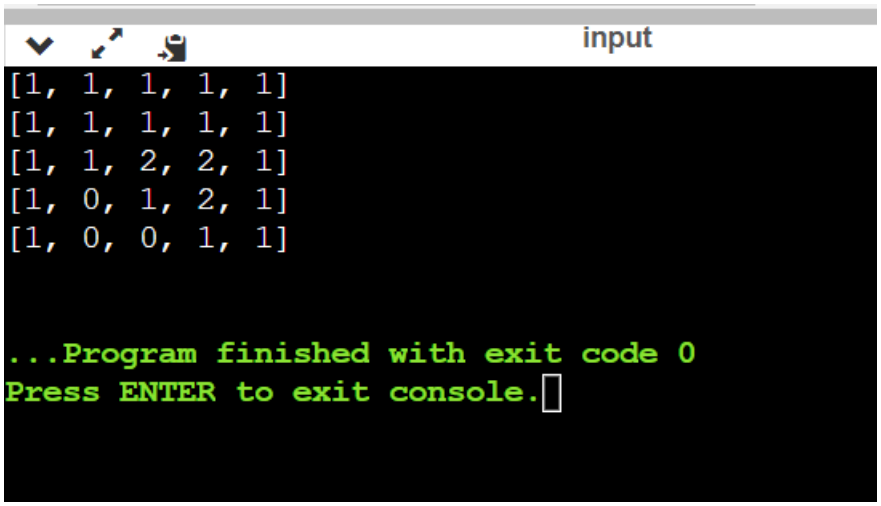
Problem 6: Flood-fill Algorithm

```
def flood_fill(image, sr, sc, new_color):
    if image[sr][sc] == new_color:
        return image

    rows, cols = len(image), len(image[0])
    original_color = image[sr][sc]

    def dfs(row, col):
        if (
            row < 0
            or row >= rows
            or col < 0
            or col >= cols
            or image[row][col] != original_color
        ):
            return

        image[row][col] = new_color
        dfs(row + 1, col)
        dfs(row - 1, col)
        dfs(row, col + 1)
        dfs(row, col - 1)
```

```
    dfs(sr, sc)
    return image


image = [
    [1, 1, 1, 1, 1],
    [1, 1, 1, 1, 1],
    [1, 1, 0, 0, 1],
    [1, 0, 1, 0, 1],
    [1, 0, 0, 1, 1],
]

sr = 2
sc = 2
new_color = 2

filled_image = flood_fill(image, sr, sc, new_color)
for row in filled_image:
    print(row)
```


input
[1, 1, 1, 1, 1]
[1, 1, 1, 1, 1]
[1, 1, 2, 2, 1]
[1, 0, 1, 2, 1]
[1, 0, 0, 1, 1]
...Program finished with exit code 0
Press ENTER to exit console.