

130)Champagne tower

CODE:

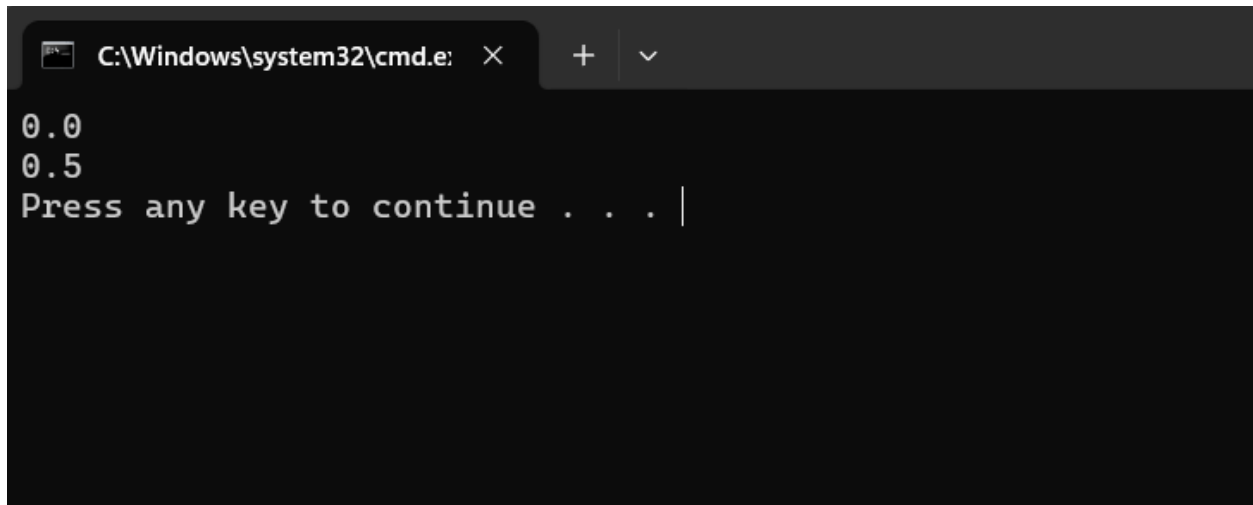
```
def champagneTower(poured, query_row, query_glass):
    tower = [[0.0] * (i + 1) for i in range(101)]
    tower[0][0] = poured

    for i in range(query_row):
        for j in range(i + 1):
            q = (tower[i][j] - 1.0) / 2.0
            if q > 0:
                tower[i + 1][j] += q
                tower[i + 1][j + 1] += q

    return min(1.0, tower[query_row][query_glass])

# Test cases
print(champagneTower(1, 1, 1)) # Output: 0.0
print(champagneTower(2, 1, 1)) # Output: 0.5
```

OUTPUT:

A screenshot of a Windows command prompt window. The title bar shows the path 'C:\Windows\system32\cmd.e' with a close button. The window has a dark background with white text. The output of the program is displayed: '0.0' on the first line, '0.5' on the second line, and 'Press any key to continue . . . |' on the third line, where the cursor is positioned after the vertical bar.

TIME COMPLEXITY : $O(n^2)$