

StairCase

Problem

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Staircase detail

This is a staircase of size $n = 4$:

```
#
##
###
####
```

Its base and height are both equal to n . It is drawn using # symbols and spaces.
The last line is not preceded by any spaces.

Write a program that prints a staircase of size n .

Function Description

Complete the staircase function in the editor below.

staircase has the following parameter(s):

- int n : an integer

Print

Print a staircase as described above.

Input Format

A single integer, n , denoting the size of the staircase.

Constraints

$0 < n \leq 100$.

Output Format

Print a staircase of size n using # symbols and spaces.

Note: The last line must have 0 spaces in it.

```
13 class Result {
14
15     /*
16      * Complete the 'staircase' function below.
17      * The function accepts INTEGER n as parameter.
18      */
19
20     public static void staircase(int n) {
21
22
23         for(int i = 0; i < n; i++){
24             for (int j = 0; j < n - i - 1; j++){
25                 System.out.print(" ");
26             }
27             for(int k = 0; k <= i; k++){
28                 System.out.print("#");
29             }
30
31             System.out.println();
32         }
33     }
34 }
35
36
37
38
```

Line: 23 Col: 25

Upload Code as File

☐ Test against custom input

Run Code

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Test case 0

Test case 1

Test case 2

Test case 3

Test case 4

Test case 5

Test case 6

Compiler Message

Success

Hidden Test Case

Unlock this testcase for 5 hackos.

Unlock

Time and Space complexity for StairCase problem:

Time Complexity: Since the code provides a nested for loop we have to take that into consideration, the inner loop involves $(n - i - 1)$, and the outer loop involves $(i + 1)$ iterations, since we have two loops involve, we iterate through it by $n * n/2$, which equates to n^2 . So the time complexity for the staircase problem is $O(n^2)$.

Space complexity: The memory this code takes up is not a lot, since it involves three variables (i, j, k) however all of those variables depend on the size of n, the only input used is n so the memory used does not change, even with different size of n. The Space complexity of this will be $O(1)$.