

Triangle Number Pattern

Problem Description: You are given with an input number N, then you have to print the given star pattern corresponding to that number N.

For example if N=4

Pattern output : 1

22

333

4444

How to approach?

1. Take N as input from the user.
2. Figure out the number of rows, (which is N here) and run a loop for that.
3. Now, figure out how many columns are to be printed in ith row and run a loop for that within this.
4. Now, figure out “What to print?” in a (row, column) number. It can depend on the column number, row number or N.

Pseudo code for the given problem:

input=N

i=1

While i is less than or equal to N:

j=1

While j is less than or equal to i:

print(i)

Increment j by 1

Increment i by 1

Add a new line here

❑ Let us dry run the Code for N=4

- $i=1(≤4)$
 - ➔ $j=1(≤1)$, so print "1"
 - ➔ $j=2(>1)$, move out of the inner loop with a new line
- $i=2(≤4)$

- $j=1$ (≤ 2), so print "2"
- $j=2$ (≤ 2), so print "2"
- $j=3$ (> 2), move out of the inner loop with a new line

- $i=3$ (≤ 4)
 - $j=1$ (≤ 3), so print "3"
 - $j=2$ (≤ 3), so print "3"
 - $j=3$ (≤ 3), so print "3"
 - $j=4$ (> 3), move out of the inner loop with a new line
- $i=4$ (≤ 4)
 - $j=1$ (≤ 4), so print "4"
 - $j=2$ (≤ 4), so print "4"
 - $j=3$ (≤ 4), so print "4"
 - $j=4$ (≤ 4), so print "4"
 - $j=5$ (> 4), move out of the inner loop with a new line
- $i=5$ (> 4), move out of the loop

So , final output:

1
22
333
4444