

Reverse number pattern

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

For example if N=4

Pattern output : 1

```
21
321
4321
```

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 particular (row, column). 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

value=i

While j is less than or equal to i:

print(value)

Increment j by 1

Decrement value 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 value=1.
 - $j=2 (>1)$, move out of the inner loop with a new line.

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

So , final output:

1
21
321
4321