

Number Pattern

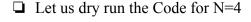
Problem Description: You are given with an input number N, then you have to print the given pattern corresponding to that number N.

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For example if N=4
Pattern output: 1
23
345
4567
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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 there in ith row and run a loop for that within this. Here, first you need to run a loop to print the spaces too.
- 4. Now, figure out "What to print?" in a particular (row, column). It can depend on the column number, row number or N which is (row number+column number after spaces -1) here.

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Pseudo code for the given problem: input=N i=1 While i is less than equal to N: spaces=1 <math>While spaces is less than (n-i): print('') Increment spaces by <math>1 = 1 f=1 f=1
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- i=1(<=4)
 - → 4-1=3 spaces are getting printed first.
 - \rightarrow j=1(<=1), so print=1+1-1=1
 - \rightarrow j=2 (>1), move out of the inner loop with a new line
- i=2(<=4)
 - → 4-2=2 spaces are getting printed first.
 - \rightarrow j=1 (<=2), so print=2+1-1=2
 - \rightarrow j=2 (<=2), so print=2+2-1=3
 - \rightarrow j=3(>2), move out of the inner loop with a new line
- i=3(<=4)
 - → 4-3=1 space is getting printed first.
 - \rightarrow j=1(<=3), so print=3+1-1=3
 - \rightarrow j=2(<=3), so print=3+2-1=4
 - \rightarrow j=3(<=3), so print=3+3-1=5
 - \rightarrow j=4(>3), move out of the inner loop with a new line
- i=4(<=4)
 - → 4-4=0 no space is getting printed.
 - \rightarrow j=1(<=4), so print=4+1-1=4
 - \rightarrow j=2(<=4), so print=4+2-1=5
 - \rightarrow j=3(<=4), so print=4+3-1=6
 - \rightarrow j=4(<=4), so print=4+4-1=7
 - \rightarrow 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

23

3 4 5

4567

