Number Star Pattern 2

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 :   12344321
                    123**321
                    12****21
                    1******1

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, you need to run 3 loops here, in the first loop you need to print numbers, in the 2nd loop you need to print stars, again in the third loop you need to print numbers.
4. Now, figure out "What to print?" in a particular (row, column). In the first loop you have to print numbers in increasing order upto N-row number+1, then you need to print stars, and after than numbers in decreasing order upto 1.

Pseudo code for the given problem:

input=N
numstars=0
i=1
While i less than or equal to N:
            value=1
         While value less than or equal to N-i+1:
                    Print(value)
                    Increment value by 1
         stars=1
         While stars is less than or equal to numstars:
                    Print("")*
                    Increment stars by 1
         value=N-i+1
         While value is greater than or equal to 1:
                    Print(value)

Decrement value by 1
Increment i by 1
Increment numstars by 2.

❏ Let us dry run the Code for N=4
- i=1(<=4)
  - ➔ value=1(<=4-1+1), so print 1.
  - ➔ value=2(<=4-1+1), so print 2.
  - ➔ value=3(<=4-1+1), so print 3.
  - ➔ value=4(<=4-1+1), so print 4.
  - ➔ value=4(>4-1+1), so move out of this inner loop.
  - ➔ stars=1(>numstars=0),so print nothing and move out of this inner loop.
  - ➔ value=4(>=1), so print 4.
  - ➔ value=3(>=1), so print 3.
  - ➔ value=2(>=1), so print 2.
  - ➔ value=1(>=1), so print 1.
  - ➔ value=0(<1), so move out of this inner loop.

- i=2(<=4)
  - ➔ value=1(<=4-2+1), so print 1.
  - ➔ value=2(<=4-2+1), so print 2.
  - ➔ value=3(<=4-2+1), so print 3.
  - ➔ value=4(>4-2+1), so move out of this inner loop.
  - ➔ stars=1(<=numstars=2), so print "*"
  - ➔ stars=2(<=numstars=2), so print "*".
  - ➔ stars=3(>numstars=2), so move out of this inner loop.
  - ➔ value=3(>=1), so print 3.
  - ➔ value=2(>=1), so print 2.
  - ➔ value=1(>=1), so print 1.
  - ➔ value=0(<1), so move out of this inner loop.

- i=3(<=4)
  - ➔ value=1(<=4-3+1), so print 1.
  - ➔ value=2(<=4-3+1), so print 2.
  - ➔ value=3(>4-3+1), so move out of this inner loop.
  - ➔ stars=1(<=numstars=4), so print "*"
  - ➔ stars=2(<=numstars=4), so print "*".
  - ➔ stars=3(<=numstars=4), so print "*".

- ➔ stars=4(<=numstars=4), so print "*".
- ➔ stars=5(>numstars=4), so move out of this inner loop.
- ➔ value=2(>=1), so print 2.
- ➔ value=1(>=1), so print 1.
- ➔ value=0(<1), so move out of this inner loop.

- i=4(<=4)
  - ➔ value=1(<=4-4+1), so print 1.
  - ➔ value=2(>4-4+1), so move out of this inner loop.
  - ➔ stars=1(<=numstars=6), so print "*"
  - ➔ stars=2(<=numstars=6), so print "*".
  - ➔ stars=3(<=numstars=6), so print "*".
  - ➔ stars=4(<=numstars=6), so print "*".
  - ➔ stars=5(<=numstars=6), so print "*"
  - ➔ stars=6(<=numstars=6), so print "*"
  - ➔ stars=7(>numstars=7), so move out of this inner loop.
  - ➔ value=1(>=1), so print 1.
  - ➔ value=0(<1), so move out of this inner loop.

- i=5(>4), move out of the loop

So , final output:
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12344321
123**321
12****21
1******1
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