Character 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:A

BC

CDE

DEFG

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 for ith row (which is equal to row number i.e i here) and run a loop for that within this.
4. Now, figure out "What to print?" in a particular row, column number. It can depend on the column number, row number or N which depends on both column number and row number here. As each row starts from 'A'+i-1 and increases with 1 for each column.

Pseudo code for the given problem:

input=N

i=1

While i is less than or equal to N:

        Character x='A'+i-1

        While j is less than or equal to i:

                print(x)

                Increment j by 1

                Increment x 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 'A'.
        - ➔ j=2(>1), move out of the inner loop with a new line.

- i=2(<=4)
  - ➜ j=1 (<=2), so print 'B'.
  - ➜ j=2 (<=2), so print 'C'.
  - ➜ j=3(>2), move out of the inner loop with a new line.

- i=3(<=4)
  - ➜ j=1 (<=3), so print 'C'
  - ➜ j=2 (<=3), so print 'D'
  - ➜ j=3 (<=3), so print 'E'
  - ➜ j=4(>3), move out of the inner loop with a new line.

- i=4(<=4)
  - ➜ j=1 (<=4), so print 'D'
  - ➜ j=2 (<=4), so print 'E'
  - ➜ j=3 (<=4), so print 'F'
  - ➜ j=4 (<=4), so print 'G'
  - ➜ j=5(>4), move out of the inner loop with a new line.

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

So , final output:
A
BC
CDE
DEFG