for loops:

[1,10]

ż) Give me all numbers until 10:

↳ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

i) Range (10) :   It will give us the integers
                  It will exclude the last no.

   range (3) : [0, 1, 2]

   => 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

   ↳ Default start of range funcⁿ is 0.

ii) Range (start, end) :   [start, end)

   Range (1, 5) :   [start, end-1]

                  ↳   [1, 2, 3, 4]

   ≫ Range (1, N) : n = 5

iii) 1, 2, 3, 4, 5, 6, 7, 8, 9

   ≫   1, 3, 5, 7, 9

Range (start, end, jump).

$1, 2, 3, 4, 5, 6, 7, 8, 9, 10$ $^{-1}$ is $^{+1}$

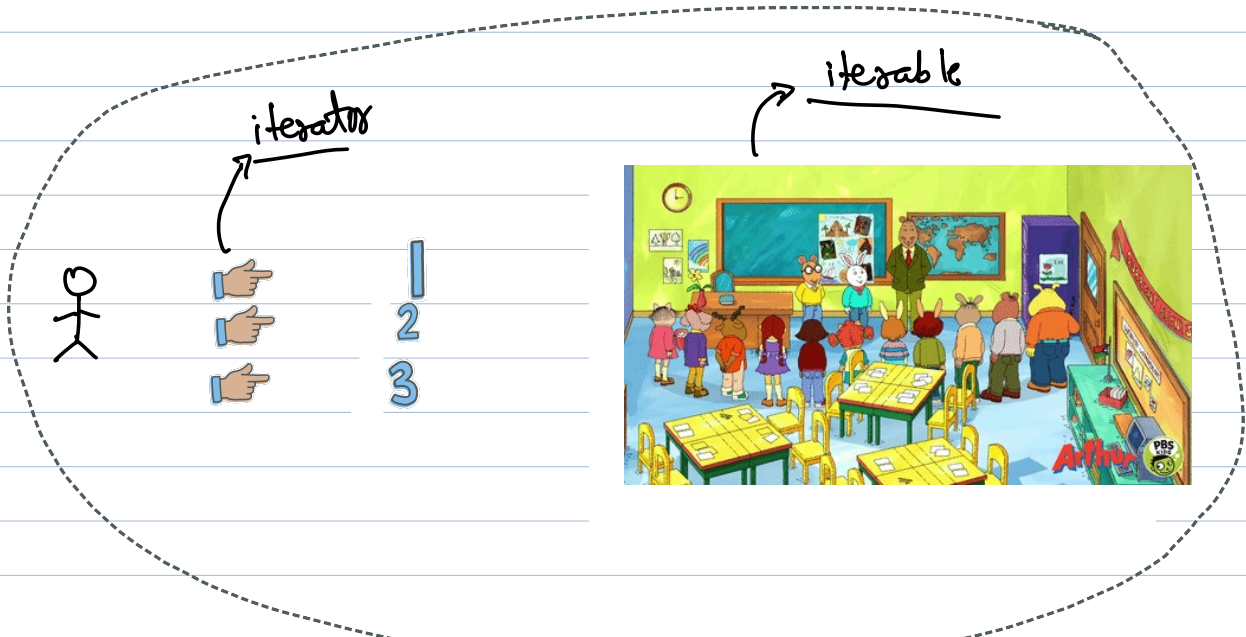iv)   Range (10, 1, -1)

     10, 9, 8, 7, 6, 5, 4, 3, 2

=>   Range (10, 12, -2)   [10, 11]

     10, -2 => 8

=>   Range (start, stop, jump)

=> If jump is -ve & stop > start
     then we will not get anything.

iterable

iterator

i) In order to do iterat^n it should be iterable

☆ Syntax for "for" loop:

for ~~iterator~~ in ~~iterable~~ :
⇒ do somethig.

Q.1) Take user input n & print number 1-N.

⇒   n = int(input())

for uncle in range(1, n+1):
print(uncle)

☆ Patterns:

i) Print patter :
if n = 1 , n = 2 , n = 3

☆ ☆ ☆ ☆ ☆ ☆

ii) for n , print "☆" print of N×N?

N = 1   N = 2   n = 3
☆   ☆ ☆   ☆ ☆ ☆
             ☆ ☆   ☆ ☆ ☆
                          ☆ ☆ ☆

=) ☆☆☆| if n = 3

for (i.) in range (5):
        (print ("☆"))

row 1 ↳ ☆
row 2   ☆   ☆ ☆ ☆
row 3   ☆   ☆ ☆ ☆
                      ☆ ☆ ☆

for i in range (3):

        for j in range (3):   0,1,2
                print ("☆ ", end=" ")

        print()

        × ✓

$i = \underset{x}{\underline{0}}, \; \overset{\vee\vee}{1}, \; 2$

$j = \underline{0}, \; 1, \; 2$

$\bigstar - \bigstar - \bigstar -$
$\bigstar - \bigstar - \bigstar -$
$\bigstar - \bigstar - \bigstar -$

Q. take user input point following patter:

n = 3 →

$\bigstar$
$\bigstar \quad \bigstar$
$\bigstar \quad \bigstar \quad \bigstar$

n = 2 :

$\bigstar$
$\bigstar \quad \bigstar$

n = 4 :

j →	0	1	2	3
i 0	$\bigstar$			
1	$\bigstar$	$\bigstar$		
2	$\bigstar$	$\bigstar$	$\bigstar$	
3	$\bigstar$	$\bigstar$	$\bigstar$	$\bigstar$

$\bigstar$ ↳ With outer for loop we do rows.
↳ with Inner for loop we do columns

↳ How many times should we run
outer loop   range(n)

↳ How many times should we run

inner loop   range (i + 1)

```
for  i   in  range (n)
        for j  in  range (i+1):
                print ("*", end=" ")
        print()
```