

**EM&CP BLK Wednesday, January 26, 2022**

# for loop

Syntax:

for <var> in <seq>:  
    <body>

#2) Also, be put/used in the <body>

#1) — basic counter —  
keep track of # of  
times in loop

(iteration)

iterable  
sequence:

- ① string → " " or ' ' Python & Procs
- ② list → [ , , ] Python only
- ③ using range

Sum <sup>first</sup> n natural numbers

$$\mathbb{N} = \{1, 2, 3, 4, 5, \dots\}$$

n=5

1 2 3 4 5 6 7 8 9 ...

1+2+3+4+5

initialization

0 + 1 = 1

running total

1 + 2 = 3

3 + 3 = 6

6 + 4 = 10

10 + 5 = 15

for number in range(n+1)  
total = total + number

$\text{range}(\text{num}) \rightarrow 0, 1, 2, \dots, (\text{num}-1)$

$\text{range}(\text{start}, \text{end}) \rightarrow \text{start}, \text{start}+1, \dots, (\text{end}-1)$

$\left( \begin{array}{l} \text{range}(-2, 5) = ? \\ \text{range}(-2, -10) = ? \\ \text{range}(0, 10) = ? \end{array} \right)$

Also,

$\text{range}(\text{start}, \text{end}, \text{interval})$

ex.  $\text{range}(\overset{\downarrow}{2}, \overset{\downarrow}{10}, \overset{\downarrow}{2}) \rightarrow \underline{2, 4, 6, 8}$

$\text{range}(-5, 10, 2) \rightarrow ?$

$\text{range}(10, 5, -2) \rightarrow ?$

$\text{range}(5, 10, -2) \rightarrow ?$



code other have written



Recall — Python: Chp 3

10.1 → # huge

10.101 → wuz diff