

# 19/25      Loops

\* loops in python are used to execute a block of code repeatedly until a certain condition is met. Python mainly provides two types of loops:

(i) for loop

(ii) while loop

(iii) nested loop

→ for loop inside for loop

→ for loop inside while loop

→ while loop inside while loop

→ while loop inside for loop.

(i) for loop:

It is used to iterate over a sequence (like tuple, string, range).

two types:

- \* for loop with sequence: string, list, tuple, set, dict.
- \* for loop with range.

e.g; name = "midhun"

for i in name:

print(i)

O/P  
m  
i  
d  
h  
u

"~~and print~~" is smooth

~~e.g~~ for enumerate(i) print display  
the position and character string

e.g; for i in enumerate(name):

print(i)

O/P (0, 'm')

(1, 'i')

(2, 'd')

(3, 'h')

(4, 'u')

(5, 'n')

~~adding new thing or~~

Process for loops:

(i) for

Initialization

condition

Incrementation / Decrementation.

range (start val, stop val, step size)

eg; for i in range(1, 5, 1):

    fall, prints i  $\downarrow$  step size. ref. of  
    start stop

print(i)

O/P

1  
2  
3  
4

name = "bheema Rao"

for i in range(0, len(name), 1):

    print(i, name[i])

O/P

0 b : (error) statement at i not i  
1 h . (i) failing  
2 e  
3 e  
4 m  
5 a  
6  
7 R  
8 a  
9 o

\$ To print even numbers (2 to 10).

for i in range(2, 11, 2):

    print(i)

O/P

2  
4  
6  
8  
10

(size got 2, low got 2, low + 2) open

# write a program to print if number  
is odd print "odd number" or no. is  
even print "even number".

for i in range (1, 11, 1):

if (i % 2 == 0):

    print ("even number")

else:

    print ("odd number")

o/p , odd number  
2 even number  
3 odd number  
4 even number  
5 odd number  
6 even number  
7 odd number  
8 even number  
9 odd number  
10 even number.