PYTHON PROGRAMMING
GATE DA/DSA

Agenda:

Conditional Statements

* Loops ✓
  a) for
  b) While
* Break, Continue, Pass statements in Python.

Character to Unicode:

ord('a') = 97

Unicode to Character:

chr(97) = 'a'

```
if m < 10:
    if n == 6 and o < 5:
        if m + n > 12:
            print("1")
        else:
            if n - o == 2:
                print("2")
            else:
                print("3")
    else:
        if o > 3:
            print("4")
        else:
            print("5")
else:
    if m > 5:
        if n * o > 24:
            print("6")
        else:
            print("7")
    else:
        print("8")
```

m = 8
n = 6, o = 4

1

What will be the output of the following code when m = 8, n = 6, and o = 4?

m+n > 12

14 > 12 → True

ii) m = 8, n = 5, o = 3

```
x, y, z = 10, 5, 2

if x>5:
  x = x>>y//~z
  if x>12:
    print("X value: ", x)
  else:
    print("Z value: ", z)
else:
  print("Y value: ", y)
```

x = 10, y = 5, z = 2

$x = x >> y // \sim z$

$x = 10 >> 5 // \sim 2$

$\sim n = -(n+1)$

i) $\sim$ $\sim 2 = -3$

ii) $//$

iii) $>>$ $5 // -3$

$x = 10 >> 5 // -3$

$x = 10 >> -2$ — will throw error.

-2 $\lfloor -1.66 \rfloor$ $\frac{5}{-3}$

a) X value: 10

b) Y value: 5

c) Z-value: 2

d) Error ✓

Loops :

Suppose, you want to repeatedly do certain operation then concept of loops comes into picture.

for loop

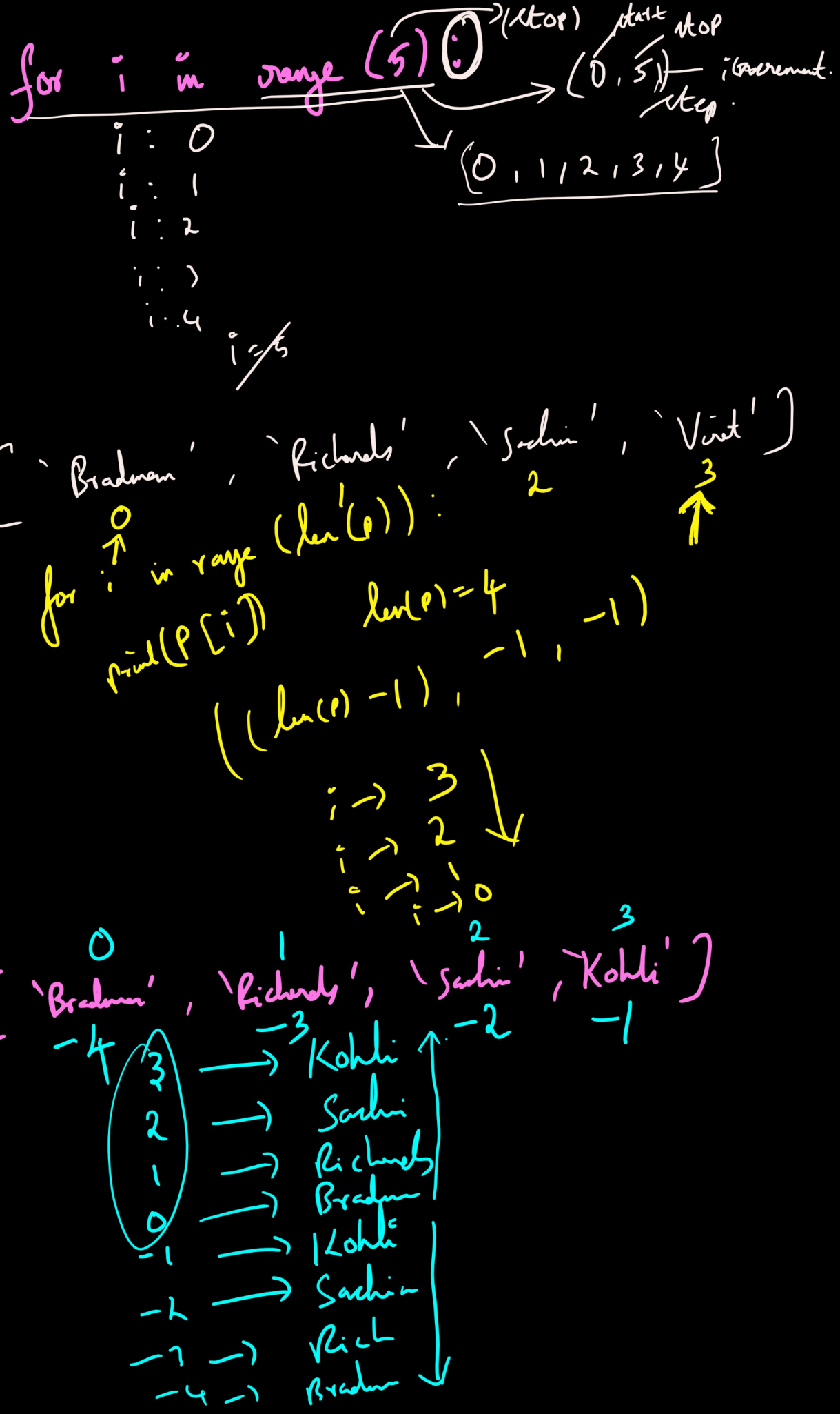
When you are iterating through some sequence

While loop

Use while loop when you are repeatedly doing something based on some condition.

('a', 'b', 'c', 'd', 'e') ← length of tuple = 5.

0 1 2 3 4


for i in range (5) :
(stop)
start
stop
step
increment.
(0, 5)
[0, 1, 2, 3, 4]
i : 0
i : 1
i : 2
i : 3
i : 4
i = 5
p = ['Bradman' , 'Richards' , 'Sachin' , 'Virat']
0
2
3
for i in range (len(p)) :
print(p[i])
len(p) = 4
((len(p) - 1) , -1 , -1)
i -> 3
i -> 2
i -> 0
0
1
2
3
['Bradman' , 'Richards' , 'Sachin' , 'Kohli']
-4
-3
-2
-1
3 -> Kohli
2 -> Sachin
1 -> Richards
0 -> Bradman
-1 -> Kohli
-2 -> Sachin
-3 -> Rich
-4 -> Bradman

range (len(player))

Start : 0

Stop : 4 ← X

Step : 1

0, 1, 2, 3

range (-len(player))

Start : 0

Stop : -4

Step : 1

no value in range

range (-len(player), 0, 1)

↓

start : -4

stop : 0 ←

step : 1

-4, -3, -2, -1

List

list[-4]

list[-3]

[-2]

[-1]

l = [['Virat', 'Rohit'], ['Msd', 'Warner'], ['Babar', 'Rizwan']]

0 1 2

['Virat', 'Rohit']

['Msd', 'Warner']

['Babar', 'Rizwan']

for player_list in l:

for player in player_list:

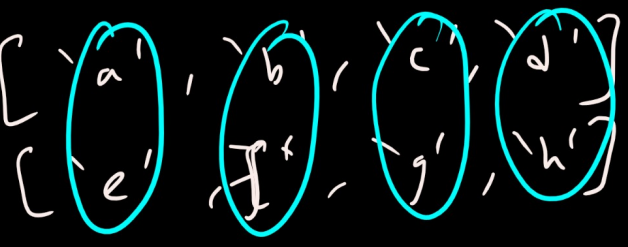
print (player)

Virat

Rohit

...

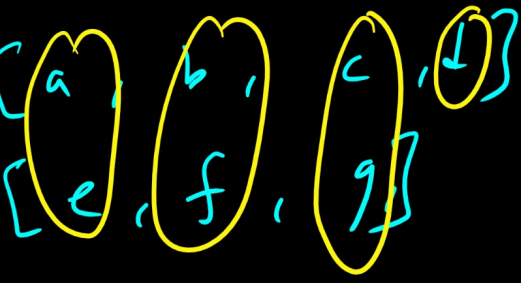
l_1 : 4 elements
l_2 : 4 elements




```
for a,b in zip(l1, l2)
    print(a,b)
```

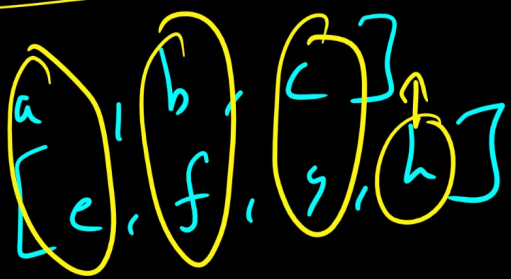
a e
b f

l_1 : 4 elements
l_2 : 3 elements



a	e
b	f
c	g

l_1 : 3 elements
l_2 : 4 elements



While <condition>:
[code will get executed
if this condition failed
Came out of while loop.

For loop: When you know the number of iterations.

While loop: number of iterations is unknown and te