Bitwise operator: In bitwise operator we have:

Logical AND (&), Logical OR (|), Logical NOT (~), Logical left shift (>>), Logical right shift (<<). Formula we use is 2**n (2 power n)

Eg: 12=> 1 1 0 0

5=> 0 1 0 1

(OR) |=> 1 1 0 1 = 13

(AND)&=>0 1 0 0 = 4

Left shift => 13>>2 =3

Right shift=>13<<2= 52

Nested If…Else: If inside another if

Syntax: if(cond1): #outer if

```
    if (cond 2): #inner if
        statements for inner if
    else:
        statements for inner else
else:
    statements for outer else
```

Loops: Loops in python are used to execute a block of code repeatedly until it satisfies a certain condition.

Types of loop:

- for loop
- while loop
- nested loop => *for loop inside for loop
  *for loop inside while loop
  *while loop inside while loop
  *while loop inside for loop

1.for loop: *for loop with sequence

Syntax: for var in sequence_var:

Stmts

*for loop with range () function

Syntax: for var in range ():

Stmts

Eg: sub= “python”

for i in sub:

print(i)

*To obtain position of var: str= “yash”

str [0] => “y”

*we use “enumerate()” function to obtain both position and value

Eg: sub = “python”

for i in enumerate(sub):

print(i)

*=> for loop using range()

range(start value, stop value, step size)

[start value is like initialization , stop value is like condition , step size is like inc/dec]

- we have default start value “0”
- default step size is “1”

Eg: range (1,11,1)

(i=1, i<11, i+1) =>It will print 1,2,3,4,5,6,7,8,9,10

*To obtain position and value we can use enumerate() and range()

*To reverse: Eg: for i in range(5,-1,-1)

print(i, sub[i])