Datatypes

Chart, funnel chart

Description automatically generated

None – when we have a variable and we didn’t assign it any value it is none.

Numeric type – int, float, complex, bool

Float – 2.5

Int – 5

Complex number – a+bi and example here is num = 9 + 4j 🡪 we can check it by type(num)

B = 5

K = float(b) – enter b

Convert normal number to complex number

K = 6

C = complex(b,k) – here we need to pass two variables.

Print(c)

* Bool means true/false which is used for conditions

B<k will result in true/false

Bool = b < k 🡪 bool will give True 🡪 type(bool)

B > k will give false

Int(True) will give 1

Int(false) will give 0

Sequence data types are list, string, tuple, set, range

Lst = [10,12,13]

Type(lst)

S = {10,12,12,12,15}

Type(s)

T = (25,26,24)

Type(t)

Str = “uday”

Type(str)

St = ‘a’

Type(st)

Range – used for iteration which means we will go from 1 to some number like 100

Range(10) 🡪 range(0,10)

List(range(10)) – converting a range into a list and will give output of list with 10 values

Now we will print the even numbers till 10

List(range(2,10,2)) first 2 is the starting number and second number is the max number and the third number is the difference number.

Type(range(10)) – will give the type as range

In dictionaries all the key values should be UNIQUE (why we use the curly braces is because it is a set without unique values)

D = {‘uday’ : ‘oneplus’, ‘rishi’: ‘samsung’ , ‘puja’: ‘iphone’}

d.key() will display all the keys, d.values() will display all the values

Q : how to get a particular value as an example redmi ?

Operators

Shape

Description automatically generated

1. Maths add, sub, \*, /
2. Assignment operator – x = 2 we are assigning an operator, however we can go further x = x + 2 🡪 4; x +=2 🡪 6 ; x \*= 3 🡪 18; new one we can assign 2 values at a time : a,b = 5,6 🡪 when we print a it will give 5
3. Unary operator: value which supports – n = 7 ; n = -n ; if we print the output it will give -7
4. Relational operators: a = 5; b = 6; a>b will give false; now if we need to compare two values we will use == in python ; a ==b will give false ; now change the value of a to 6 and check a == b which will give the true; similarly we can check <= and >=;

Now let’s check for not equal != ex: a != b

1. Logical operators: AND OR NOT; a = 5; b = 4; a < 8 and b < 5 🡪 this will result True. Now we will check a < 8 and b < 2 Q: what will be the answer here?

Below the truth table for AND and OR table

Diagram

Description automatically generated

A < 8 or b < 2 will give?

Not operator

X = True – not x ; x = not x; print x