**NUMBERS**

1. In python 2 we can not get exact division (5/2=2)… we have to write 5.0/2=2.5….or we can do like [float(3)/2=2.5]
2. In python 3 we can do 5/2 =2.5
3. If you want to add (import) all the functionality of python 3 to python [from \_\_future\_\_import division ] this is for division function
4. To power the number you have to add two \* like[ 2\*\*2=4]

**STRINGS**

1.string: input 🡺 ‘swapnil’ output🡺 swapnil

2.string: input🡺 print ‘swapnil’ 🡺 output🡺swapnil

3.new line : input🡺 print ‘ swapnil \n narwade’ 🡺swapnil

Narwade

4.print function: input🡺print(“swapnil”) output🡺 swapnil

5. import print function from python 3 to python 2 🡺 from \_\_future\_\_ import print\_function

6. counting the length of string 🡺 len(‘swapnil’) output 🡺7

7. input 🡺 s=’swapnil’, s[1] 🡺’s’

8. skip every 2 nd letter from the string 🡪 s[::2]🡺 ‘sanl’

9. reverse the string 🡪 s[::-1] 🡺’linpaws’

10. till the 3rd letter 🡪 s[:3]🡺 ‘swa’

11. from the 3rd number 🡪 s[3:] 🡺 ‘pnil’

12. concatenate s=s+’swapmil’🡺 swapnilswapmil

13. use method 🡪 uppercase s.upper()🡺’HELLO’

**PRINT FUNCTION**

1. Print ‘swapnil narwade’ 🡪 ‘swapnil narwade’
2. X= ‘swa’ 🡪 print ‘my name is %X’ %(X) 🡺 ‘my name is swa’
3. Print ‘ my %s is %s and my salary is %s’ %(‘name’,‘swapnil’,’200’) 🡺 ‘my name is swapnil and my salary is 200’
4. If you have to insert a string in non order format then you have to use format method like 🡪 print ‘swapnil : {x} name {x} salary{y}’.format(x=’narawde’, y=200) 🡺 ‘swapnil narwade name narwade salary 200’

**LIST**

1. Create a list 🡪 list= [1,2,3,’swapnil’] 🡺list 🡺[1,2,3,’swapnil’]
2. Method can be used as print function 🡪 len(list) 🡺 4 🡪 list[2] 🡺 3
3. All the method works as the string like concatenate and assign
4. List doesn’t have content constraints and data constraints 🡪 that means we can add as many as entries in the list and whatever datatype like int, char, strings etc
5. List allowed to do nesting like 🡪L1=[1,2,3] 🡪L2=[4,5,6] 🡪 L3=[7,8,9] 🡺then matrix= [L1,L2,L3] 🡺 [[1,2,3],[4,5,6],[7,8,9]]
6. To get the element from the matrix you write matrix[2][1] 🡺8

**DICTIONARY**

1. Dictionary is not for sequence but we can assign every element like hash table 🡪 it is like a mapping
2. Dictionary ={‘key1’ : ‘swapnil’, ‘key2’: 2344, ‘key3’ : 1.4} 🡪 dictionary[‘key1’] 🡺 swapnil
3. Dic={‘key1’:[‘swa’,’pnil’,1,1.5], ‘key2’: ‘swapnil’} 🡪 dic[‘key1’][1] 🡺pnil 🡪dic[‘key1’][0][1]🡺w dic[‘key1’][0].upper()🡺 ‘SWA’ 🡪 dic[‘key1’][0][::-1]🡺’aws’
4. Dic={‘key1’:{‘subkey1’: { ‘supersubkey1’: ‘value’}}} 🡪 dic[‘key1’][‘subkey’][‘supersubkey’] 🡺value
5. D={} D[‘k1’]=1 D[‘k2’]=2 D[‘k3’]=3 🡪D 🡺 {‘k1’:1,’k2’=2,’k3’=3}

**FILES**

1. To open a file 🡪 f= open(‘filename.extention’)
2. To read the file 🡪 f.read() 🡺’this will show the contents inside the file’
3. To get back the curser to start of sentence 🡪 f.seek(0)
4. Create a file 🡪 %%writefile=new.txt
5. Getting the data from a file or a folfe==der===
6. For line in in open(‘new.txt’)
7. Print line 🡺 this will display the content

**FOR LOOP**

1. Syntax for ‘for loop’ is 🡪 for item in l:

Print item

1. For list for loop is 🡪 l= [1,2,3,4,5] 🡺 for item in l:

Print item 🡺 1 2 3 4 5

1. For tuple for loop is 🡪 l=[(1,2),(3,4),(5,6)] 🡪 for item in l:

Print item 🡺(1,2) (3,4) (5,6)

Print item[0] 🡺 1 3 5

For s1,s2 in l:

Print s1 🡺 1 3 5

1. For dictionaries for loop is l={‘k1’=1,’k2’=2,’k3’=3}🡪for item in l:

Print item 🡺 k1 k2 k3

* For key,value in l.deritems():

Print key 🡺 k1,k2,k3

Print value🡺 1 2 3

1. L={(1,2),(3,4),(5,6)} 🡪 for k,v in L:

Print k,v🡺1 2

3 4

5 6

Print k 🡺 5

Print v 🡺 6

**WHILE LOOP**

1. While condition:

Statement

Else:

Statement

1. **Break :** breaks out of the current closet enclosing loop
2. **Continue:** goes back to closet enclosing last loop and continue
3. **Pass :** does nothing at all

**Range**

1. Range(1,10) 🡪 print 1-9 🡺 it will print 1 to upto 10
2. Range(10)🡪 this will print 0-9 🡺 this is the first 10 number
3. Range (0,20,2) 🡪 this will show the list of numbers from 0-2-4---18 upto 20 with step of 2
4. X=0, y=20 ,z=2;;; range(x,y,z)🡪 this will show the list of number containing 0-2-4-18

**Type**

1: type(x)🡪 this will show us the type of the x

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***Tutorials point***

1. Python is a general-purpose interpreted, interactive, object-oriented, and high-level programming language. It was created by Guido van Rossum during 1985- 1990
2. Python is processed at runtime by the interpreter
3. You do not need to compile your program before executing it
4. Statements in Python typically end with a new line. Python does, however, allow the use of the line continuation character (\) to denote that the line should continue. For example –

total = item\_one + \

item\_two + \

item\_three

***Stack Overflow***

1. By using ''.join

list1 = ['1', '2', '3']

str1 = ''.join(list1)

Or if the list is of integers, convert the elements before joining them.

list1 = [1, 2, 3]

str1 = ''.join(str(e) for e in list1)