Type of objects in python:				
Sr.No.	**Type**	**Abbreviation**	**Details**	**Examples**
1	**int**	Integer	Whole number	eg 4,9,100
2	**float**	floating point	decimals	eg 3.45, 5.60
3	**str**	string	Sentence or words and immutable	" " or ' '
4	**bool**	boolean	For True or False	

Data structures in python				
Sr.No.	**Type**	**Abbreviation**	**Details**	**Delimiter**
5	**list**		Combination of int/float/str/bool and mutable	[ ]
6	**tuple**		Combination of int/float/str/bool and immutable	( )
7	**dict**	dictionary		{ }
8	**Set**		Set does not maintain the elements in any particular order and only instances of immutable types can be added to a Python set. Set are mutable	{ }

Typecasting in python (changing one type of data to another)

Input	Output
float(2)	2.0
int(1.1)	1
int("1")	1
int("a")	Error
str(1)	"1"
set(l)	list to set
list(s)	set to list
int(True)	1
int(False)	0
bool(1)	True'
bool(0)	False'

Expressions	
25/6'	4.166666667
25//6'	4

Escape sequence	p
Eg \n	New line
\t	tab
\\	to get single slah
'Don\'t worry'	to ignore ' after slash

Multiple variables refering to same object is called **aliasing**

Case 1 **A = [1,2,3,4,5]**
B = A Then all any changes in A will be reflected in B

Case 2 **A = [1,2,3,4,5]**
B = A[:] This will create copy of A in B and change in A wont affect B

Sr.No.	Syntax/command	Output	Remarks
1	type(variable)	int/float/str/bool	

2	True - False	1	Because system considers True = 1 & False = 0
3	True - True	0	
4	True/False	Error	"inf" when using numpy
5	n = 5+7j		j - imagnary no and n - complex no
6	type(n)	complex	
7	n.real	5	To extract real or imagnary part from complex no. Type "n." and press tab button and select req.
8	n.imag	7	
9	n.conjugate	function complex	
10		Hint/help	Shift+tab on any cell fucntion for help/hint or to give details of that function
11	l = [3,4.5,'sudh']		When using combination of int, float, string and boolean
12			When using list all the elements will be given sr.no. or index from left to right starting from 0,1,2,3,.. i.e 3-0, 4-1, 5-2, sudh-3
13	l[1]	4	To select any element from the list use index or sr.no.
14	t = (33,455,'adit')		Tuple same as list with difference in brackets
15	d = {'a':'sudh','b':22}		Dictionary variable
16	d = {45}		Set
17	bool()	FALSE	Default boolean constructor
18	bool(foo)	False	If zero
19		True	If nonzero
20	int( )	0	Integer constructor
21	float( )	0	Float constructor
22	float('3.14')	3.14	
23	list( )	[]	List constructor
24	list('hello')	['h' ,' e' , 'l' , 'l ',' o']	
25	set('hello')	{ 'h' ,' e' , 'l' , 'l ',' o' }	
26	squares=['red', 'yellow', 'green', 'purple', 'blue'] for i, square in enumerate(squares): print(i, square)	0 red 1 yellow 2 green 3 purple 4 blue	It will assign index to the alpha elements and perform the required task where I is the index

27	reply = input(Enter x and y, separated by spaces:)
	pieces = reply.split( ) # returns a list of strings, as separated by spaces
	x = float(pieces[0])
	y = float(pieces[1])
			When using a sequence of characters in single input and trying to extract it seperately using split command

STRING class			

28	s = "ineuron" s[0]	i	Filtering out some of the characters from a word in a string variable. All characters will be assigned indexes in ascending order starting from 0,1,2,3,etc from left to right and from right to left starting from -1,-2, -3 etc	
29			When there is a sentence with spaces in between the words the index no will also take into account the spaces i.e. assign index value to the spaces between words as well	
30	s = "ineuron" s[0:5]	ineur	Extract character between ranges i.e more than 1 characters. It will capture characters from 0-4 excluding 5 i.e it will exclude the upper bound	Subset of the string variable
31	s = "ineuron" s[0:5:2] s[5:0:-1]	ier oruen	Extract characters between ranges by picking alternate characters in a string variable. 2 at last means select every 2nd value i.e 0, 0+2=2, 2+2=4 and so on	
32	s[:-3]	ineu	Without lower bound/limit specified. It will consider default 0	String slicing operation
33	s[-2:]	on	Without upper bound/limit specified. It will consider default max characters	
34	s[::2]	iern	Without upper and lower bound/limit specified. It will consider default all characters with 2 specified indicating a jump of 2 characters	
35	s[::1]	ineuron	It will showcase entire string	
36	s[::-1]	norueni	It will reverse the entire string	
37	s[-7:-2:1]	ineur		
38	s + '1'	ineuron1	Add a character to a string	String concatenation operation
39	s + str(1)	ineuron1		
40	'sudh' + '12345'	sudh12345		
41	len(s)	7	Gives the length of the string	
42	s * 2	ineuronineuron	It will repeat the string continuous	
43	s.count('n')	2	It will display the number of 'n' characters in a string.	
44	s.split('u')	['ine', 'ron']	It will split the string at 'u' and convert it into a list variable.	
45	s1.split(' ')		It will split entire sentence into separate words to a list variable as per the delimiter set.	
46	""" """		When you have multi line string use triple time double quote.	

47	s1.upper()		Will convert entire string into a upper case/capital letters
48	s1.lower()		Will convert entire string into a lower case/small letters
49	s1 = s1.upper()		Reassign the string to upper case
50	s2 = "aditya bale" s2.title()	Aditya Bale	It will change the first letter of each word to upper case.
51	s1.removesuffix("le")	"aditya ba"	It will remove the letters from the string
52	s2.find('ya')	4	It will return index of the first letter
53	s2.capitalize()	Aditya bale	It will change the first letter of first word to upper case.
54	s3.swapcase()	aDITYA BALE	Upper case will be change to lower and vice versa.
55	' '.join(reversed(s2))	elab aytida'	Both function will reverse the string
56	s2[::-1]	elab aytida'	
57	reversed(s2)		It will split the entire sentence to individual letters string within a list and reverse the same.
58	s4 = ' adit ' s4.strip()	adit	It will remove the whitespaces before and after the word.
59	s4.lstrip()	'adit '	Remove the whitespaces to the left
60	s4.rstrip()	' adit'	Remove the whitespaces to the right
61	" ".join("aditya")	'a d I t y a'	It will add space or any character given between double quotes in between each letter of the string.
62	s.center(20,"z")	zzzzzzineuronzzzzzzz	It will centre the word in 20 spaces and fill the rest spaces on left and right with z.
63	s.isalpha() s.isalnum() s.isdigit() s.startswith("I")	True True False True	Any function in is…. Format will give output only in either TRUE or FALSE
64	s.isascii()	TRUE	ASCII table define each charater is numeric code wihich ccomputer understands.
65	s5 = "aditya\tbale" s5.expandtabs()	'aditya bale'	It will remove \t
66	s.splitlines()		Will split the para into separate lines.