

## PYTHON

1. Python is a compiler or interpreter language? what is the difference between compiler and interpreter language?
2. What are different data structures in python? explain them with a general usage  
->int, str, list, tuple, dictionary, array, set.
3. Difference between list and tuple and set?
4. Explain decorator and generator in python with an example?
5. Why yield is used in python?
6. What is pep8 in python? is it mandatory?
7. What does indentation mean in python? is it mandatory?
8. What are some oops concepts supported by python?
9. What are some advantages of python over c/java ?
10. Difference between keywords break, continue, pass in python?
11. Explain some difference between python2 and python3
12. Explain some builtin modules in python with one usage? os, sys etc

- \*\*\*1. explain some fields where usage of python will be an advantage than other language
- \*\*\*2. explain some fields where usage of python will be a disadvantage
- \*\*\*3. have u used any frameworks in python like unittest/pytest etc ? can u explain about them

### Programs:

#### Easy:

1. how to find the count of given character in a string?
2. how to reverse a string?
3. how to generate random number?
4. how to convert all letters in a string to capital letters or small letters?
5. write a python program to write some data to a file and read it

#### Medium:

1. write a program to find given ip address is valid or not ? - regex
2. write a program to find given mailid is valid or not? - regex
3. write a program to find given input is palindrome or not? \*ignore spaces in between given string  
ex: madam, nurses run
4. write a program to reverse a string without using built in functions
5. write a program to start two threads t1, t2  
t1 should print numbers 1-10 with sleep of 1 second, t2 should print numbers 10-1 with a sleep of 2 seconds

#### Hard:

1. write a program to arrange the only positive numbers in a list in ascending order?  
example: [1,4,3,2,-1,-9,5,-1,4] output: [1,2,3,4,-1,-9,4,-1,5] \*negative numbers position should not change
2. write a program to get the maximum number by using the given numbers  
example:  
input: 12,13,4,7,9,333,213  
output: 9743332131312