

## Assignment 1

1) what are the data types in python? Explain

sol The basic data types are int, float, str, list, dict, tuple, set, bool

i) Integer - int = consists of whole number ie 0 to  $\infty$

ii) Floating point - float = decimal numbers

iii) String - str = ordered sequence characters

iv) Lists - list = ordered sequence characters, []

v) Dictionary - dict = unordered key: {' ': ' '}

vi) Tuples - tuple = ordered mutable sequence ( )

vii) Sets - set = unordered set of unique obj { , }

viii) Boolean - bool = true or false

2) Briefly explain history of Python

sol Python is a high-level programming language

It was designed by Guido van Rossum in the

year 1991 & was developed by Python

Software Foundation. The Syntax in python

contain less number of lines than compared with any other programming language. So, this makes it more readable & allows programmers to express concepts in fewer lines. Python is among top five most popular languages.

3) Explain all the operators in Python?

sol There are mainly 7 types of operators

i) Arithmetic Operators - These are used with numeric values to perform common mathematical operations

Es +, -, \*, /, %, \*\*, //

ii) Assignment Operator - These are used to assign values to the variable

Es +=, -=, \*=, /=, %=, \*\*=, <<=, |=, ^=, >>=, <<=

(iii) Comparison Operator - These are used to compare two values

Es ==, !=, >, <, >=, <=

iv) Logical Operator - used to combine conditional statements

Ex and, or, not

v) Identity Operator - used to compare the objects  
Ex is, is not

vi) membership Operator - used to test if a sequence is presented in an object

Ex in, not in

vii) Bitwise Operator - used to compare binary numbers

Ex and, or, xor, not, zero fill left shift, right shift  
 $\&, |, \wedge, \sim, <<, >>$

4) Explain the features of Python

Sol - It is a high level language

- most modular

- Easy to code

- It is portable language

- GUI Programming Support

- Free & Open Source

5 Justify why Python is interactive interpreted language

sol Python is object oriented language so it supports

so it support object-oriented style or technique of

Programming that encapsulates code within objects

So it is interactive language. Python is called

interpreted language because it ~~then~~ goes through

an interpreter which turns code you write

into the language understood by the computer

processor that's the reason python is interactive

interpreted language