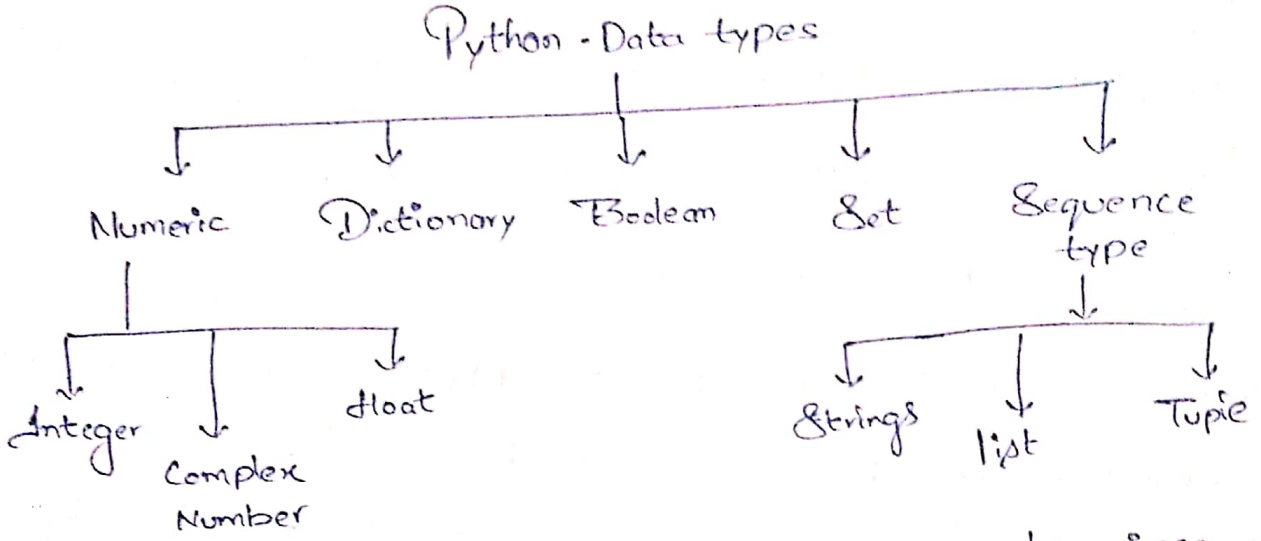
Python Assignment-2

1 What the data types in python? Explain?



* Data types represent a kind of value which determines what operations can be performed on that data.

Numeric :- It is any representation of data which has a numeric value.

* Integer :- Positive or Negitive whole numbers
* float :- Any real number with a floating point representation in which a fractional component is denoted by a decimal symbol or scientific notation.
* Complex number :- A number with a real and imaginary Component represented as $x+ij$. x and y are floats and j is -1 (Square root of -1 called an imaginary number)

Boolean :- It has two built in values true or false.
T & F are capital.

Sequence type :- It is an ordered collection of similar or different data types.

* String :- It is a collection of one or more characters put in single, double or triple quotes.

* List :- It is an Order collection of one or more data items Put in Square brackets.

Dictionary :- It is an unordered collection of data in a key: value pair form. A collection of such pairs is enclosed in Curly braces Ex:- {1: "Steve", 2: "Bill"}

2 Briefly Explain history of python?

Python was Conceived in the late 1980s by Guido Van Rossum and developed by python Software Foundation. It was mainly developed for emphasis on code readability and its Syntax allows programmers to Express Concepts in fewer lines of Code.

The programing language which python is said to have succeded in ABC programming language.

The inspiration for the name Came from BBC's TV show " Monty python's Flying Circus.

The language was finally released in 1991. It uses a lot fewer codes to express the Concepts. when we Compare it with Java, C++ & C. Its design phylosophy was too good.

The main objective is to provide code redeability and advanced developer productivity.

3 Explain all the operators in python?

(2)

Arithmetic Operators

Operator	Description	Syntax
+	Addition: Adds two operands	x+y
-	Subtracts two operands	x-y
*	Multiplies two operands	x*y
/	float: Divides the first operand by the second	x/y
//	floor: Divides the first operand by the second	x//y
%	Modulus: returns remainder	x%y
**	Power: Returns first raised to power second	x**y

Relational Operators:

>	Greater than	x>y
==	Equal to	x==y
!=	not equal	x!=y
>=	greater than equal	x>=y

logical operator:

and	True if both the operands are true	x and y
or	True if either of the operands is true	x or y
not	True if operand is false	not x

Bitwise Operators:-

&	Bitwise AND	x&y
|	Bitwise OR	x|y
~	Bitwise NOT	~y
^	Bitwise XOR	x^y
>>	Bitwise rightshift	x>>y

Assignment Operators:-

=	Assigning the values from right to left	x = a+b
+=	left side operand and then assign to left	a+=b a=a+b
*=	multiply a*b and assign to a	a*=b a=a*b
-=	Subract a-b and assign to a	a-=b a=a-b
/=	Divide a/b and assign to a	a/=b a=a/b
%=	Modulus of a%b and assign toa	a%=b a=a%b
&=	Perform a&b and assign to a	a&=b a=a&b
>>=	right shift	a>>=b a=a>>b

4 Explain the features of python?

Easy to learn and use

Expressive languages :- understable and readable

Interpreted language :- Debugging is easy

Cross platform language :- portable language, it can run equally on different platforms

free and open source : It is freely available at official web address.

Object oriented language : It supports concepts of class and objects come into existence.

Extensible :- It implies that other languages such as C/C++ can be used to compile the code.

GUI Programming Support :- It can be easily integrated with languages like C, C++, Java etc

Integrated :- Graphical user interfaces can be developed using python.

5 Justify why python is interactive interpreted language?

Python is an interpreted object Oriented Programming language. the interpreted it meant that each time a Program is run the interpreter checks through the code for errors and interprets the instruction into machine readable bytecode.

It is a translator in Computers language which translate the given code line by line in machine readable bytecodes if any error encountered it stops the translation until the error is fixed.

Interactive python is very much helpful for the debugging purpose. It simply return the >>> prompt for the corresponding output of the statement is appropriate and returns for incorrect stmts.

Within second you can find errors in python. debugging the error is easy.