19/Jun/2020 Assignment-2.

1. What the data types in python? Explain.

Ans: Python has the following standard or built-in data types:

1. Numeric:

A numeric value is any representation of data which has a numeric value.

There are three types of numbers.

(i) Integer: +ve or -ve whole numbers

(ii) Float: A fractional component is denoted by a decimal symbol.

(iii) Complex: A number with a real and imaginary component represented as $x+yj$.

2. String:

A string value is a collection of one or more characters put in single, double or triple quotes.

3. List:

A list object is an ordered collection of one or more data items, not necessarily of the same type, put in square brackets.

→ lists are mutable.

→ lists allows duplicate elements as well.

Ex: my_list = ["Apple", "Banana", "Orange"]

4. Tuple:

A Tuple object is an ordered Collection of one or more data items, not necessarily of the same type, put in Curlybrackets.

→ Tuples are immutable

→ Tuple allows duplicate elements.

Ex: my_Tuple = {"A", "B", "C"}

5. Dictionary:

A dictionary object is an unordered Collection of data in a key: value pair form. A Collection of such pairs is enclosed in Curly brackets.

Ex: my_dictionary = {"Name": "Apoorva",
"Rollno": 16, "Batch": 1}

2. Briefly explain history of python.

Ans. python → The programming language python was conceived in the late 1980s, and its implementation was started in December 1989 by Guido Van Rossum at Centrum Wiskunde & informatica (CWI) in Netherlands as a successor

to ABC Capable of exception handling and interfacing with the Amoeba operating system.

3. Explain all the Operators in python.

Ans: Arithmetic Operations: These are used with numeric values to perform common mathematical operations.

Operators are: + Addition, -, *, /, %, **, //

2. Assignment Operators: Assignment Operators are used to assign values to variables.

operators are: =, +=, -=, *=, /=, %=, //=, **=, &=, |=, ^=, >>=, <<=

3. Comparison Operators: Comparison Operators are used to compare two values.

Operator	Name
==	Equal
!=	Notequal
>	Greater than
<	less than
>=	Greater than or equal to
<=	less than or equal to

4. Logical Operators: logical Operators are used to Combine Conditional statements

Operator	Description
and	Returns True if both statements are true
or	Returns True if one of the statements is true
not	Reverse the result.

5. Bitwise Operators: Bitwise operators are used to Compare binary numbers.

Operator	Name
&	AND
|	OR
^	XOR
~	NOT
<<	Zero fill left shift
>>	Signed right shift

4. Explain the features of python.

Ans: 1. Easy to Code
2. Free and Open Source
3. Object-Oriented Language
4. GUI programming Support
5. High-level language

6. Extensible feature.
7. Python is portable language
8. Python is integrated language
9. Interpreted language
10. Large standard by library

5. Justify why python is interactive interpreted language

Ans. Python is interactive - You can actually sit at a python prompt and interact with the interpreter directly to write your programs.

Python is called an interpreted language because it goes through an interpreter, which turns code you write in to the language understood by your Computer's processor.