# Assignment - 2

1. What are the data types in Python ? Explain

Ans: Python has five different data types:

→ Numbers :- Number datatypes store numeric values. Number objects are created when you assign a value to them.

→ Strings :- Strings in Python are identified as a contiguous set of characters represented in the quotation marks. Python allows either pair of single or double quotes.

→ Lists :- Lists are the most versatile of Pythons Compounds data types. A list contains items seperated by commas and enclosed within square brackets.

→ Tuples :- A tuple is another sequence data type that is similar to the list. A tuple consists of a number of values seperated by commas. Unlike lists, however tuples are enclosed within parenthesis.

→ Dictionary :- Python dictionaries are kind of hash table type. They work like associative array or hashes found in Perl and consist of key value pairs. A dictionary key can be

almost any Python type, but are usually numbers or strings. Values, on the other hand can be any arbitary Python object. Dictionaries are enclosed within curly braces

---

2. Briefly explain history of Python.

Ans Python has become one of the most interesting Programming languages of our time. It was created by Gudio von Rossum during 1985 to 1990. Python is named after a TV show called 'Monty Python's Flying Circus' and not after Python the Snake.

---

3. Explain all operators in Python.

Ans:- → Arithmetic Operators: They are used to Perform mathematical like addition, subtraction, multiplication, division etc.

→ Relational operators: They are used to compare the values. It either returns true or false according to conditions.

→ Logical operators: They use to perform Logical AND, Logical OR & Logical NOT operations.

→ Bitwise operators: They act on operands as if they were strings of binary digits. They operate bit by bit.

→ Assignment operators: Assignment operators are used in Python to assign values to variables. For example, a = 5 is a simple assignment operator that assigns the value 5 on the right to the variable 'a' on the left.

→ Special operators: There are some special type of operators like:

* Identify operators: 'is' & 'is not' are the identify operators in Python. They are used to check if two values or variables are located on the same part of the memory. It either returns true or false according to condition.

* Membership operators: 'in' & 'not in' are the membership operators, used to test whether a value or variable is in sequence. It either returns true or false according to condition.

4. Explain the features of Python?

Ans: Features of Python:-

Simple, Easy to learn, Free & Open source, High level language, Python is beginner's language, Portable, Interactive, Interpreted, Object oriented, Extensible, Embeddable, Extensive libraries, Databases, GUI Programming

5. Justify Why Python is interactive, interpreted language?

Ans: Python is interactive language Python is very much helpful for the debugging purpose It simply returns the prompt on the corresponding output of the statement if appropriate and returns error for incorrect statements. In this way if you have any doubts like: Whether a syntax is correct, whether the module you are importing exists or anything like that, you can be sure within seconds using Python interactive mode. Python is also interpreted language. An interpreter is a translator in computer language which translates the given code line by line in machine readable bytecodes & if any error is encountered it stops the translation until the error is fixed. unlike C language, which is a compiled Programming language.