

# PYTHON

## Assignment-2

1. What are the data types in Python? Explain.

Ans: Python have five different data types:-

1. Numbers: Number data types store numeric values. Number objects are created when you assign a value to them.

2. 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.

3. Lists: Lists are the most versatile of Python's compound data types. A list contains items separated by commas and enclosed within square brackets.

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

5. Dictionary: Python's dictionaries are kind of hash-table type. They work like associative arrays or hashes found in perl and consist of key value pairs. A dictionary key can be almost any Python type, but are



but are usually numbers or strings. values on the other hand can be any arbitrary 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 Guido van Rossum during 1985-1990. Python is named after a TV show called 'Monty Python's Flying Circus' and not after Python the snake.

3. Explain all the operators in python.

Ans:-

1. Arithmetic operators:-

Arithmetic operators are used to perform mathematical operations like addition, subtraction, multiplication, division etc.,

2. Relational operators:-

Relational operators compare the values. It either returns True or False according to condition.

3. Logical operators:-

Logical operators perform Logical AND, Logical OR and Logical NOT operations.



#### 4. Bitwise operators:

Bitwise operators act on operands as if they were strings of binary digits. They operate bit by bit, hence the name.

#### 5. 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.

#### 6. Special operators: There are some special type of operators like,

##### 1. Identity operators:

'is' and 'is not' are the identity 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.

##### 2. Membership operators:

'in' and 'not in' are the membership operators, used to test whether a value or variable is in a sequence. It either returns True or False according to condition.



4. What are the features of Python.

Ans: Features of Python:-

1. Simple
2. Free and open source
3. High-level language
4. Portable
5. Interactive
6. Interpreted
7. Object Oriented
8. Extensive Libraries
9. GUI programming
10. Databases

5. Justify why python is interactive, interpreted language.

Ans: Python is interactive language. Interactive python is very much helpful for the debugging purpose. It simply returns the >>> prompt or the corresponding output of the statement if appropriate and returns error for incorrect statements. Python is also interpreted language. An interpreter is a translator in computer's language which translates the given code line-by-line in machine readable bytecodes, and if any error is encountered it stops the translation until the error is fixed.