

## Python Assignment - 3

### 1) What is the Python path?

**PYTHONPATH** is an environment variable that the user can set to add additional directories that the user wants Python to add to the sys. path directory list. So, when you import modules in your Python scripts, PYTHONPATH is also checked to see which directories might contain the imported module.

### 2) what are python modules? Name some commonly used built-in modules in python?

programming terminology, the function is a separate, complete and reusable software component. Long and complex logic in a program is broken into smaller, independent and reusable blocks of instructions usually called a module. print() and input() for I/O, number conversion functions int(), float(), complex(), data type conversions list(), tuple(), set(), etc.

### 3) what are local variables and global variables in python?

**Global variables** are those which are not defined inside any function and have a global scope whereas **local variables** are those which are defined inside a function and its scope is limited to that function only.

### 4) Is python case sensitive?

Yes, python is a case-sensitive language without a doubt. If we write a variable in a small letter and want to use it further in the program, then use it in the same manner only otherwise it will be considered as you are using a new variable.

### 5) what is type conversion in python?

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- Type Conversion is the conversion of an object from one data type to another data type.
- Implicit Type Conversion is automatically performed by the Python interpreter.
- Python avoids the loss of data in Implicit Type Conversion.

### 6) Is indentation required in python?

- Indentation is mandatory in python **to define the blocks of statements**. The number of spaces must be uniform in a block of code. It is preferred to use whitespaces instead of tabs to indent in python.
- indentation is a very important concept of Python because without proper indenting of the Python code, you will end up seeing an Indentation Error and the code will not get compiled.

### 7) what is the difference between python Array & lists?

**List:** A list in Python is a collection of items that can contain elements of multiple data types, which may be either numeric, character logical values, etc. It is an ordered collection supporting negative indexing. A list can be created using [] containing data values.

**Array:** An array is a vector containing homogeneous elements i.e. belonging to the same data type. Elements are allocated with contiguous memory locations allowing easy modification, that is, addition, deletion, accessing of elements. In Python, we have to use the array module to declare arrays. If the elements of an array belong to different data types, an exception “Incompatible data types” is thrown.