**ASSIGNMENT-5**

**1.What is Python? Why is it so popular?**

* The python language is one of the most accessible programming languages available because it has simplified syntax and not complicated, which gives more emphasis on natural language. Due to its ease of learning and usage, python codes can be easily written and executed much faster than other programming languages.
* Python language is incredibly easy to use and learn for new beginners and newcomers. And since it is an interpreted language, it also helps that one can quickly change its code base, in turn adding to the popularity of Python among developers, made it the most popular programming language.

**2.What are the key features of Python?**

* Easy to code
* Free and Open Source
* Object-Oriented Language
* GUI Programming Support
* High-Level Language
* Extensible feature
* Python is Portable language
* Python is Integrated language
* Interpreted Language
* Large Standard Library
* Dynamically Typed Language

**3.What type of language is python? Programming or scripting?**

Yes, Python is a scripting language. It is also an interpreted and high-level programming language for the purpose of general programming requirements.

**4.What is pep 8?**

PEP 8 is a document that provides various guidelines to write the readable in Python. PEP 8 describes how the developer can write beautiful code. It was officially written in 2001 by Guido van Rossum, Barry Warsaw, and Nick Coghlan. The main aim of PEP is to enhance the readability and consistency of code.

**5.Python an interpreted language. Explain**

Python is an interpreted language, which means the source code of a Python program is converted into bytecode that is then executed by the Python virtual machine. ... Python code is fast to develop: As the code is not needed to be compiled and built, Python code can be readily changed and executed.

**6.How is memory managed in Python?**

Memory management in Python involves a private heap containing all Python objects and data structures. ... At the lowest level, a raw memory allocator ensures that there is enough room in the private heap for storing all Python-related data by interacting with the memory manager of the operating system.

**7.What is namespace in Python?**

A namespace is a system that has a unique name for each and every object in Python. An object might be a variable or a method. Python itself maintains a namespace in the form of a Python dictionary.