**Assignment – 1**

**B1. What is Python ,Name some of the features of Python.**

**Python** is a dynamic, high level, free open source and interpreted programming language. It supports object-oriented programming as well as procedural oriented programming. In **Python**, we don't need to declare the type of variable because it is a dynamically typed language.

**Features in Python**

* Easy to code: **Python** is a high-level programming language. ...
* Free and Open Source
* Object-Oriented Languag
* GUI Programming Support
* High-Level Language
* Extensible **feature**
* **Python** is Portable language
* **Python** is Integrated language

**B3. Is python the right choice for Web based Programming?**

Yes, It is the developers' favorite for many reasons, most of all its readability and efficiency. **Python web development** is easier to learn which makes a **better choice** for beginners. However, that doesn't mean it won't get the job done just as well.

**Python is Easy**

### ****More Functions – Less Code****

### ****A Stepping Stone to learning other Code****

### ****Perfect Language for Building Prototypes****

### ****Perfect Language if you’re on a Budget****

### ****A Lot of useful Frameworks****

### ****Security****

### B4. Why was the language called as Python?

### Monty Python’s Flying Circus is a BBC Comedy TV series from the year 1969+. It is a highly viewed TV series and is rated 8.8 in IMDB.

### B6. What is the language from which Python has got its features or derived its features?

### Python is derived from programming languages such as ABC, Modula 3, small talk, Algol-68. Van Rossum picked the name Python for the new language from a TV show, Monty Python's Flying Circus.

* **Interpreted Language:** Python is processed at runtime by Python Interpreter.
* **Object-Oriented Language:** It supports object-oriented features and techniques of programming.
* **Interactive Programming Language:** Users can interact with the python interpreter directly for writing programs.
* **Easy language:** Python is easy to learn, especially for beginners.
* **Straightforward Syntax:** The formation of python syntax is simple and straightforward, which also makes it popular.
* **Easy to read:** Python source-code is clearly defined and visible to the eyes.
* **Portable:** Python codes can be run on a wide variety of hardware platforms having the same interface.
* **Extendable:** Users can add low level-modules to Python interpreter.
* **Scalable:** Python provides an improved structure for supporting large programs then shell-scripts.

**B8. Does python support switch or case statement in Python? If not what is the reason for the same?**

**Python** doesn't have a **switch**/**case statement** because of Unsatisfactory Proposals . ... Most programming languages have **switch**/**case** because they don't have proper mapping constructs. You cannot map a value to a function, that's why they have it.

**B9. How Python is interpreted?**

**Python** is an “**interpreted**” language. This means it uses an interpreter. An interpreter is very different from the compiler. An interpreter executes the statements of code “one-by-one” whereas the compiler executes the code entirely and lists all possible errors at a time.

**B12.How memory is managed in Python?**

Memory management in Python involves a private heap containing all Python objects and data structures. Interpreter takes care of Python heap and that the programmer has no access to it.

The allocation of heap space for Python objects is done by Python memory manager. The core API of Python provides some tools for the programmer to code reliable and more robust program.

Python also has a build-in garbage collector which recycles all the unused memory. When an object is no longer referenced by the program, the heap space it occupies can be freed.

The garbage collector determines objects which are no longer referenced by the sprogram frees the occupied memory and make it available to the heap space.

### B13.What is namespace in Python?

### A namespace is a collection of currently defined symbolic names along with information about the object that each name references.

### Python itself maintains a namespace in the form of a Python dictionary. Let's go through an example, a directory-file system structure in computers.

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