

Python Assignment

Module – 1 (SDLC)

Q.1. What Is Software?

Answer: Software is a set of instructions, data, or programs used to operate computers and execute specific tasks. It is the non-tangible component of computers, as opposed to hardware, which is the physical aspect. Software can be broadly categorized into three main types:

1. **System Software:** This includes operating systems, device drivers, and utilities that help the computer hardware to function and provide a platform for running application software.
2. **Application Software:** These are programs designed to platform specific tasks for users, such as word processors, web browsers, games, and business applications.
3. **Development Software:** This includes tools environments for building and developing software, such as compilers, debuggers, and integrated development environments.

Q.2. What are the types of Applications?

Answer: Application software can be categorized into various types based on their functionality and the tasks they perform. Here are some common types:

1. **Productivity Software:** These applications help users accomplish tasks more efficiently. Examples include: Word processors
2. **Database Software:** These applications are used to create, manage, and manipulate databases. Examples include: Microsoft Access, MySQL
3. **Multimedia Software:** These applications are used to create, edit, and play audio, video, and graphic files. Examples include: Adobe Photoshop, VLC Media Player, Audacity.

- 4. Entertainment Software:** These applications are designed for leisure and entertainment. Examples include: Video games, Media players.
- 5. Graphic Design Software:** These applications are used for creating and editing visual content. Examples include: Vector graphics, Graphic design.

Q.3. What is Programming?

Answer: Programming, also known as coding, is the process of creating software by writing instructions that a computer can execute. These instructions, known as code, are written in a programming language, which provides a set of syntax and semantics for expressing computational tasks, programming involves several key activities:

- 1. Problem Solving:** Identifying and understanding the problem that needs to be solved, and designing an algorithm or plan to solve it.
- 2. Writing Code:** Translating the algorithm into a programming language. Popular programming languages include Python, Java, C++. JavaScript, and many others.
- 3. Maintenance:** Updating and modifying the code to fix issues, improve functionality, or adapt to new requirements over time.

Q.4. What is Python?

Answer: Python is a high-level, interpreted programming language known for its simplicity and readability. Created by Guido van Rossum and first released in 1991, Python emphasizes code readability with its use of significant indentation and a clean, easy-to-understand syntax. Here are some key features and aspects of Python:

- 1. Ease of Learning and Use:** Python's syntax is designed to be easy to read and write, making it an excellent choice for beginners and experienced programmers alike.
- 2. Interpreted Language:** Python is an interpreted language, meaning code is executed line-by-line, which can simplify debugging and development.

- 3. Dynamic Typing:** Python uses dynamic typing, allowing variables to change types, which adds flexibility but requires careful handling to avoid runtime errors.