Module -1 (SDLC)

Q-1 What is software? What is software engineering?

Ans - Software refers to a set of instructions, data, and programs that enable a computer or digital device to perform specific tasks, operations, or functions.

Software engineering is the field involving with the systematic and orgazised design, development, testing, and maintenance of software systems. It includes a collection of principles, methodologies, tools, and best practises.

Q-2 What are type of software?

Ans - Software can be categorized into several types. Here are some common types of software:

Software can be categorized into several types based on its functionality, purpose, and usage. Here are some common types of software:

1.System Software:

Operating Systems : Software that manages hardware resources and provides essential services to other software. Examples Windows, macOS, Linux, and Android.

2.Application Software:

Word Processing Software: Used for creating, editing, and formatting text documents. Examples include Microsoft Word, Google Docs.

Presentation Software: Used for creating presentations with slides. Examples include Microsoft PowerPoint, Google Slides.

Web Browsers: Software used to access and interact with websites and web applications. Examples - Google Chrome, Mozilla Firefox, and Microsoft Edge.

3. Development Software:

Integrated Development Environments (IDEs): Software suites that provide tools for coding, debugging, and testing software Examples - Visual Studio, Eclipse.

Text Editors: Simplified tools for writing and editing code. Examples include Notepad++, Sublime Text, and Atom.

Q-3 What is SDLC? Explain each phase of SDLC

Ans - SDLC stands for Software Development Life Cycle, which is a structured process used by software development teams to plan, design, build, test, deploy, and maintain software systems.

There are total Six phase in SDLC life cycle :

1) Planning - Define the problem and scope of existing system,Overview the new system and determine its objectives.

2) Analysis - Gather, analyze, and validate the information, define the requirements and prototypes for new system.

3) Design- Includes the design of application, network, databases,user interfaces, and system interfaces.

4) Implementation - Implement the design into source code through coding.

5) Testing - Testing is a phase where the software is exactly tested to identify and fix defects, errors

6) Maintenance - Keep system healthy and improve and handling the residual errors and resolve any issues that may exist in the system even after the testing phase.

Q-4 What is DFD?

Ans - Data Flow Diagram. The flow of data of a system or a process is represented by DFD. It also gives insight into the inputs and outputs of each entity and the process itself. DFD does not have control flow and no loops or decision rules are present. Specific operations depending on the type of data can be explained by a flowchart.

Q-5 What is flowchart?

Ans- A flowchart is a type of diagram that represents a workflow or process. A flowchart can also be defined as a diagrammatic representation of an algorithm, a step-by-step approach to solving a task. The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows.

Q-6 What is Use-case diagram?

Ans- A use case diagram is a graphical representation of a user's possible interactions with a system. A use case diagram shows various use cases and different types of users the system has and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses