**MODULE - 1**

SE – Overview of IT Industry

1. What is software? What is software engineering?

\* The software is basically a set of instructions or commands that tell a computer what to do.

\* Software is a collection of codes, documents, and triggers that perform a specific task and meet a specific requirement.

\* Software engineering is a branch of computer science that involves the design, development, testing, and maintenance of software applications.

\* A collection of instructions, data, or programmes used to run computers and carry out specific activities is referred to as software. It is the inverse of hardware, which describes a computer's physical components.

\* Software is a catch-all term for apps, scripts, and programmes that execute on a device.

2) Explain types of software?

\* Software can be categorized into two main types: application software and system software.

\* Application software is a group of programs that help users create information. Examples of application software include: Word processors, Spreadsheets, Web browsers, Database programs, Media players.

\* System software is designed to run a computer's hardware and provides a platform for applications to run on top of.

3) What is SDLC? Explain each phase of SDLC.

\* Software Development Life Cycle (SDLC).

\* SDLC consists of various phases, such as planning, design, coding, testing, and deployment.

\* Analysis or requirement: Collect requirements from the client, including features and information about the software. Analyse the requirements and create a document.

\* Planning: Plan for the things used in the life cycle, including cost, environment, hardware, quality, and time.

\* Design or development: Create the rough architecture of the system. Start coding, making GUIs and databases, starting with small pieces and integrating them.

\* Testing: Test the software.

\* Maintenance: Maintain the software.

4) What is DFD? Create a DFD diagram on Flipkart.

\* A data flow diagram (DFD) is a graphical or visual representation using a standardized set of symbols and notations to describe a business's operations through data movement.

5) What is Flow chart? Create a flowchart to make addition of two numbers.

\* A flowchart is a diagram that represents 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.

\* This diagrammatic representation illustrates a solution model to a given problem.

\* Flowcharts are used in analyzing, designing, documenting or managing a process or program in various fields.

Here are the steps on how to create a flowchart to make addition of two numbers:

a) Start the flowchart with a terminal symbol to indicate the beginning of the program.

b) Use a process symbol to represent the input of the two numbers.

c) Connect the input process to a process symbol that calculates the sum of the two numbers.

d) Connect the sum calculation process to an output process symbol that prints the result.

e) Finally, use a terminal symbol to indicate the end of the program.

You can use flowchart symbols such as terminal, process, input/output, and decision symbols to represent the flow of the program. Remember to use arrows to connect the symbols and indicate the flow of the program.

6) What is Use case Diagram? Create a use-case on bill payment on paytm.

\* A use case diagram is a visual representation of how a user interacts with a system. It shows the different ways a user can perform actions and interact with a system, such as a website or an app.

• Summarizes details of a system and its users

• Represents the dynamic behavior of a system

• Incorporates use cases, actors, and their relationships

• Models the tasks, services, and functions required by a system