**MODULE: 1**

**SE-Overview Of IT Industry**

1)What is Software? What is Software engineering?

->Software is a program or set of programs containing instructions that provide desired functionality.

->Software Engineering is the process of designing, developing, testing, and maintaining software. It is a systematic and disciplined approach towards software development.

2)Explain types of software?

->There are two types of software which is application software and system software.

->Application software: The most common type of software, application software is a computer software package that performs a specific function for a user, or in some cases, for another application. An application can be self-contained, or it can be a group of programs that run the application for the user.

->System software: These software programs are designed to run a computer's application programs and hardware. System software coordinates the activities and functions of the hardware and software. In addition, it controls the operations of the computer hardware and provides an environment or platform for all the other types of software to work in.

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

->The software development Life Cycle is a process used by software development organization to plan ,design ,develop, test, deploy and maintain software applications.

->phases are as below:

**1. Requirements gathering and analysis:** This phase involves gathering information about the software requirements from stakeholders, such as customers, end-users, and business analysts.

**2. Design:** In this phase, the software design is created, which includes the overall architecture of the software, data structures, and interfaces. It has two steps:

* **High-level design (HLD):** It gives the architecture of software products.
* **Low-level design (LLD):** It describes how each and every feature in the product should work and every component.

**3. Implementation or coding:** The design is then implemented in code, usually in several iterations, and this phase is also called as Development.

things you need to know about this phase.

* This is the longest phase in SDLC model.
* This phase consists of Front end + Middleware + Back-end.
* **In front-end:**Development of coding is done even SEO settings are done.
* **In Middleware:** They connect both the front end and back end.
* **In the back-end:** A database is created.

**4. Testing:**The software is thoroughly tested to ensure that it meets the requirements and works correctly.

**5. Deployment:** After successful testing, The software is deployed to a production environment and made available to end-users.

**6. Maintenance:**This phase includes continue support, bug fixes, and updates to the software.

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

->It is a graphical representation of a computer program in relation to its sequence of functions.

Flowchart of addition of two numbers:

INPUT A, B

SUM=A+B

PRINT SUM