

MODULE: 1

SE – Overview of IT Industry

Q.1 What is software? What is software engineering?

Ans. 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.

Q.2 Explain types of software.

Ans.

- Application software
- System software
- Driver software
- Middleware
- Programming software

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

Ans. The Software Development Life Cycle (SDLC) is a process used by software development organizations to plan, design, develop, test, deploy, and maintain software applications. The SDLC methodology focuses on the following phases of software development:

1. Requirement Gathering

Requirements gathering is the process of determining what your projects need to achieve and what needs to be created to make that happen. You are probably familiar with the fact that everybody has their own common project assumptions about what a project should include

2. Analysis

During this software development lifecycle phase, the specialists meticulously collect precise requirements from the customer to present a solution fine-tuned to their needs. Any unclarities must be elucidated in this stage only. The analysis phase also gathers business requirements and identifies any potential risks. This step in SDLC also includes a feasibility study, which defines all fortes and weak points of the project to assess the overall project viability.

3. Designing

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.

4. Implementation

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.

5. Testing

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

6. Maintenance

This phase includes ongoing support, bug fixes, and updates to the software.

