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 and building something that serves a particular purpose and finds a cost-effective solution to problems.

Explain types of software

* Application Software
* System Software
* Programing Software
* Driver Software

Application Software: When a user interacts directly with a piece of software, it is called application software. The sole purpose of application software is to assist the user in doing specified tasks.

Example - Microsoft Word and Excel, are best example of application software.

System Software: System software runs things in the background and operating systems are an example of system software.

Example – Microsoft Windows, Apple IOS, Android.

Programing Software: Programming software and programming tools enable developers to develop, write, test and debug other software programs.

Example – VS studio, Assemblers, compilers, debuggers and interpreters.

Driver Software: A device driver is a special kind of software program that controls a specific hardware device attached to a computer. Device drivers are essential for a computer to work properly.

Example – Windows Dirver Software, linux driver Software, etc

What is SDLC? Explain each phase of SDLC.

An SDLC is Software Development Life Cycle. It is a framework defining tasks performed at each step in the software development process.

* Analysis
* Design
* Implementation or coding
* Testing
* Deployment
* Maintenance

Analysis:

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

Design:

In this phase, the software is created, which include the overall architecture of software, data structures, and interfaces.

Implementation or coding:

The design is then implemented in code, usually in several iterations, and this phase is also called as Development. This is the longest phase in SDCL model.

Testing:

The software is thoroughly tested to ensure that it meets the requirements and works correctly and there is no bugs in the software.

Deployment:

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

Maintenance:

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