

1. What is software? What is software engineering?

A: Software refers to a set of instructions or program that enable a computer to perform specific tasks.

Software engineering is the systematic application of engineering principles and methods to the design, testing, and maintenance of software.

2. Explain types of software?

A: Application software, System Software, Driver software, Middleware Software, Programming software.

- Application software: application software is a computer software package that performs a specific function for a user, or in some cases, for another application. Eg: Microsoft, paint, powerpoint
- System Software: System software coordinates the activities and functions of the hardware and software. Eg: Notepad & Calculator.
- Driver software: Also known as device drivers. Driver software facilitates communication between the operating system and the computer's various hardware components. Eg: Audio driver, Video Driver.
- Middleware Software: Software that mediates between application and system software or between two different kinds of application software. Eg: Database middleware, Application server middleware.
- Programming software: Programming software and programming tools enable developers to develop, write, test and debug other software programs. Eg: TurboC, VScode.

3. What is SDLC? Explain each phase of SDLC

A: The Software Development Life Cycle (SDLC) is a process used by software developers to plan, design, develop, test, deploy, and maintain software applications.

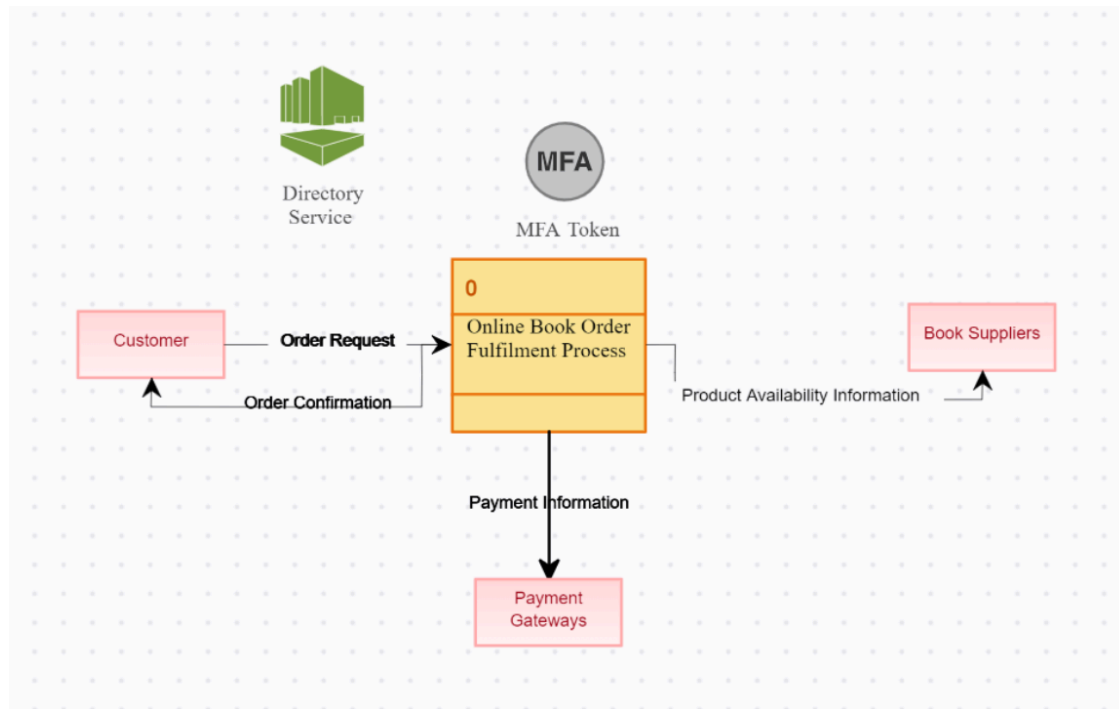
> Phases of SDLC

- Planning: Gather a team of developers, project managers, and clients, plus any other members you'd like involved in the big-picture decisions. Identify the need or problem.

- Analysis: Gather and analyze available data to determine project objectives. Create deadlines and a budget. Adjust goals and objectives to fit the deadlines and budget.
- Design: During the design stage of the development cycle, designers and developers will determine how the front and back end of the software will look and function, and they will also decide how it will be built.
- Implementation: When the software building begins, team has officially entered the implementation stage of the software development life cycle, this is the stage where developers begin coding and setting up the infrastructure for the system.
- Testing and Integration: As the implementation phase progresses and functionalities are marked as completed by developers, unit testing can begin. During the user acceptance testing stage, quality assurance team members will view and use the system as users would. The system shouldn't ever be released before testing is complete. It's one of the most important stages and guarantees that your team is ready for the system to be used by its intended audience.
- Maintenance: Once the software development project has been deployed, the maintenance phase begins. The software development life cycle never ends; it continues for the life of the software system. That's why maintenance is so important. As technology and development evolves, you'll want your software system to evolve with it.

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

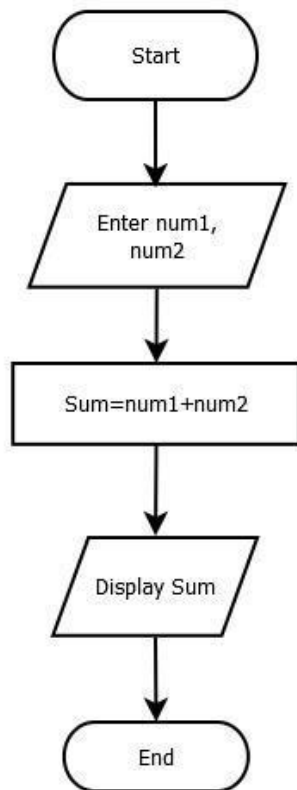
A: A data flow diagram (DFD) is a graphical or visual representation using a standardized set of symbols and notations to describe a business's operations through data movement. They are often elements of a formal methodology such as Structured Systems Analysis and Design Method (SSADM).



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

A: A flowchart is a graphical representation of a process, showing the steps in that process as symbols connected by arrows.

> Flowchart of addition of two numbers:



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

A: A use case diagram is a visual representation of the functional requirements of a system that shows the relationships among the system's actors and its use cases.

