

MODULE:1

SE- Overview of IT Industry

1. What is software? What is software engineering?

Ans.

- Software:

IEEE defines the software as “The collection of computer program, procedures rules and associated documentation and data concerned with the operation of a data processing system”.

- Software engineering:

Software Engineering is the process of designing, developing, testing, and maintaining software. It is a systematic and disciplined Approach to software development that aims to create high-quality, reliable, and maintainable software.

2. Explain types of software.

Ans.

- Application Software

Software that performs special functions or provides functions That are much more than the basic operation of the computer is known as application software. Or in other words, application software designed to perform a specific task to end-user. It is a product or a program that is designed only to fulfill end-users requirements. It includes word processors, spreadsheet, database management, inventory, payroll programs, etc.

- System Software

System software is software that directly operates the computer hardware and provides the basic functionality to the users as well as To the other software to operates smoothly. Or in other words, system software basically controls a computer's internal functioning and also controls hardware devices such as monitors, printers, and storage.

- Driver software

Device drivers control the devices and peripherals connected to a computer, enabling them to perform their specific tasks. Every device that is connected to a computer needs at least one device driver to function. such as video driver, Audio driver...etc.

- Middleware

The term *middleware* describes software that mediates between application and system software or between two different kinds of application software. For example, middleware enables Microsoft Windows to talk to Excel and Word.

Ex: Database Middleware, Application server middleware...etc.

- Programming software

Computer programmers use programming software to write code. Programming software and programming tools enable developers to develop, write, test and [debug](#) other software programs. Examples of programming software include assemblers, compilers, debuggers and interpreters.

3. What is SDLC? Explain each phase of SDLC

Ans. SDLC:

The Software Development Life Cycle is a process used bby software development organizations to plan, design, develop, test, deploy, and maintain software applications.

Requirements:

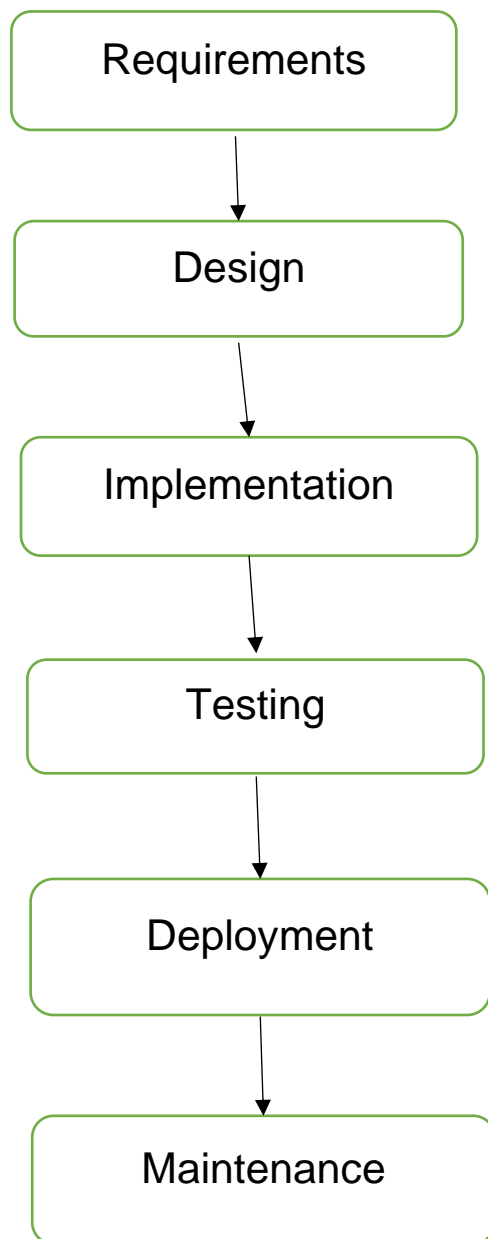
The phase involves gathering information about the software requirements from stakeholders, such as customers, end-user, and business analyst.

Design:

In this phase, the software design is created, which includes the overall architecture of the software, data structures, and interface.

Implementation:

The design is then implemented in code, usually in several terations, and this phase is also called as Devlopment.



Testing:

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

Deployment:

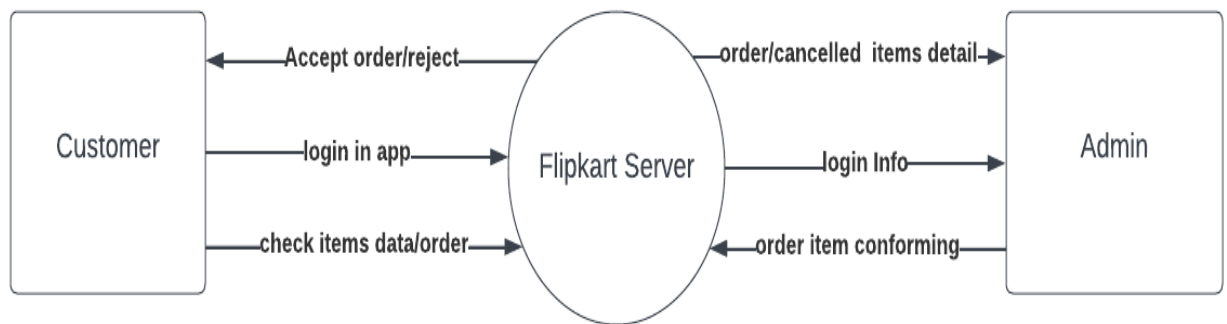
After successful testing, The software is deployed to a production environment and made available to end-users.

Maintenance:

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

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

Ans. DFD is the abbreviation for Data Flow Diagram. The flow of data of system or process is represented by DFD. It also gives insight into the input and output of each entity and the process itself. DFD does operations depending on the type of data can be explained by a flowchart it is a graphical tool. Useful for communicating with users, managers and other personnel. It is useful for analyzing existing as well as proposed system.



0 level Flipkart DFD

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

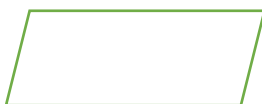
Ans. A Flowchart is a type of diagram that represent a workflow or process. A flowchart can also be defined as a diagrammatic representation of an algorithm, a step-by-step approach to solving task.



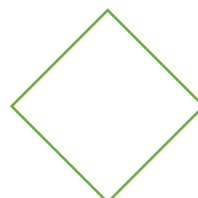
: Start / End



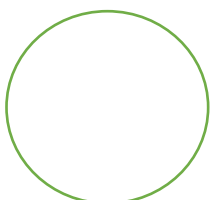
: Flow Direction



: Input / Output

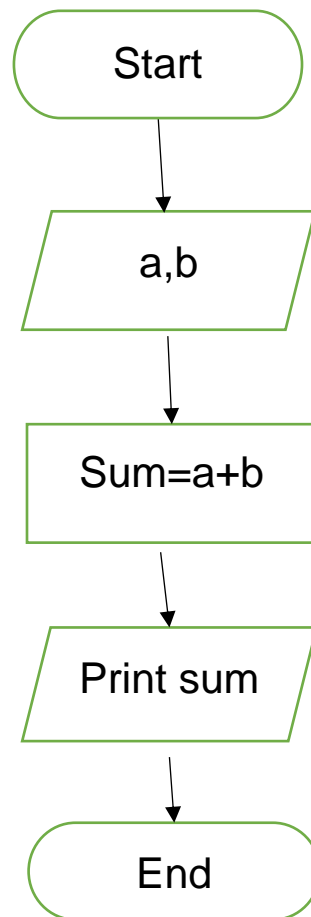


: Direction



: Connector

- Addition Flowchart



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

Ans. A use case Diagram is vital tool in system design, it provides a visual representation of how users interact with a system.

- use-case diagram on bill payment on paytm.

