

# ASSIGNMENT MODULE :- 1

## Q-1 What is software? What is software engineering?

**Ans.** Software is a set of instruction data or programs used to operate computers and execute specific tasks. Software is a generic term used to refer to application, scripts and programs that run on a device.

### **Software engineering:**

Software engineering is the branch of computer science that deals with the design, testing, and maintenance of software applications. Software engineers apply engineering principles and knowledge to build software solution for end users.

## Q-2 Explain types of software:

**Ans.** three types of software:-

### **1.System software**

### **2.Application software**

### **3.Utility software**

**(1)System software:** These software programs are designed to run a computer's application programs and hardware. System software coordinates the activities and function of hardware and software. In addition, it controls the operations of the computers hardware and provides an platform for all the other types of software to work in. **Ex.** Operating system (Windows, Androids, LINUX, ...)

**(2) Application software:** The most frequently used software is application software, which is a computer software packed 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.

**(3) Utility software:** Utility software to helps to manage, maintain and control computer resources.

### **Q-3 What is SDLC? Explain each phase of SDLC**

#### **Ans. SDLC:- software development life cycle**

It is a process used by software industry to design, develop, and test high-quality software.

**1. PLANNING:** The first phase of SDLC is the project planning stage. where you are gathering business requirements from your client or responses. This phase is when you evaluate the feasibility of creating the product revenue potential, the cost of end-users, etc.

**2. ANALYSIS:** Gather detailed business requirements and technical requirements.

**3. DESIGNING:** The design phase is where you put pen to paper-so to speak. The original plan and vision are elaborated into a software design document (SSD) that includes the system design, programming language, templates, platform to use, and application security measures. This is also where you can flowchart how the software responds to user actions.

**4. Development :** In this phase translating the design to a computer - legible language. Where the task are divides into modules or units and assigned to various developers. The developers will then start building the entire system by writing code using the programming languages they chose.

**5. TESTING:** Once the developers build the software, then it is deployed in the testing environment. Then the testing team tests the functionality of the entire system. And the testing is done to ensure that the entire application works according to the customer requirements.

**6. DEPLOYMENT:** Once the testing is done and the product is ready for deployment, it is released for customers to use. The size of the project determines the complexity of the deployment. The users are then provided with the training or documentation that will help them to operate the software.

**7. MAINTENANCE:** The customer actually starts using the developed system and those needs to be solved from time to time Maintenance is the 7th phase of SDLC.

#### Q-4 What is DFD? Create a DFD diagram on Flipkart

**Ans.** A Data Flow Diagram (DFD) is a graphical representation of the flow of data within a system. It is used in software development to visualize how data moves through the system, how it is processed, and where it is stored.

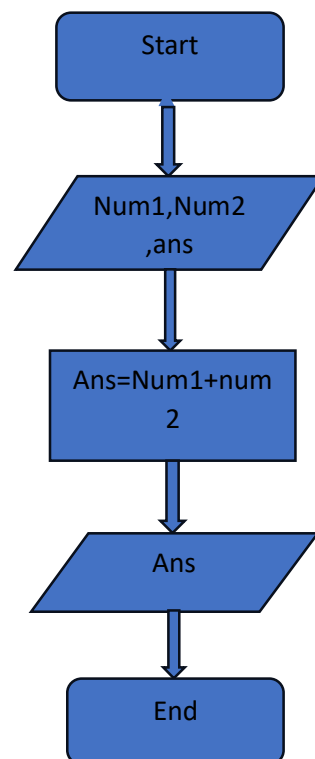
- **Flipkart DFD:**

Customer	→	Registration
Product search	→	Order placement
Payment process	→	Payment Gateway

#### Q-5 What is Flow chart? Create a flowchart to make addition of two numbers

**Ans.** A flowchart is a diagram depicting a process a system or a computer algorithm. It is a diagrammatic representation of the solution to a given problem but more importantly it provides a breakdown of the essential steps to solving the problem.

**Flowchart:**



**Q-6 What is Use case Diagram? Create a use-case on bill payment on Paytm.**

**Ans.** Use-case diagrams describe the high-level function and scope of a system. These diagrams also identify the interactions between the system and its actors. The use cases and actors in use-case diagrams describe what the system does and how the actors use it, but not how the system operates internally.

**Use-Case on bill Paytm:**

