

## 1. What is software? What is software engineering?

**Ans:** Software is a program or set of programs containing instructions that provide desired functionality. And Engineering is the process of designing and building something that serves a particular purpose and finds a cost-effective solution to problems.

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. Software engineering includes a variety of techniques, tools, and methodologies, including requirements analysis, design, testing, and maintenance.

## 2.Explain types of software?

**Ans:** The two main categories of software are application software and system software. An application is software that fulfills a specific need or performs tasks. System software is designed to run a computer's hardware and provides a platform for applications to run on top of.

System Software:

System Software is defined as a collection of programs that controls the overall operation and internal working of the computer system. It reads data from input devices and transfers the processed information to output devices. It works like a manager. It is an important part of computer. A Computer can never be used without System software. e.g. Operating System, Utility Program, Language Translator. It is difficult to design system software. System software are developed by experts only.

Application Software:

These type of software are used for some particular operations. There are several types of Application software available now a days. Each one of them are having their own application areas. These type of software can be used for beautifying the documents, making calculations, arranging data in an organized way. System software is the need of every computer but application software can be different for different computers. It is a non-essential part of computer hence it depends upon the need of the user. These are also called general purpose software. e.g. Spread Sheet Software, Word Processor, Graphic Software Read

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

**Ans:** The Software Development Life Cycle (SDLC) is a structured process that enables the production of high-quality, low-cost software, in the shortest possible production time. There are mainly 7 phase:

Phase 1: Requirement collection and analysis:

The requirement is the first stage in the SDLC process. It is conducted by the senior team members with inputs from all the stakeholders and domain experts in the industry.

Phase 2: Feasibility study:

This process conducted with the help of 'Software Requirement Specification' document also known as 'SRS' document. It includes everything which should be designed and developed during the project life cycle.

There are mainly five types of feasibilities checks : Economic , Legal, Operation feasibility , Technical, And Schedule.

Phase 3: Design : software design documents are prepared as per the requirement specification document. This helps define overall system architecture.

Phase 4: Coding: Once the system design phase is over, the next phase is coding. In this phase, developers start build the entire system by writing code using the chosen programming language. In the coding phase, tasks are divided into units or modules and assigned to the various developers. It is the longest phase of the Software Development Life Cycle process.

Phase 5: Testing: Once the software is complete, and it is deployed in the testing environment. The testing team starts testing the functionality of the entire system. This is done to verify that the entire application works according to the customer requirement.

Phase 6: Installation/Deployment: Once the software testing phase is over and no bugs or errors left in the system then the final deployment process starts. Based on the feedback given by the project Phase 7: Maintenance: Once the system is deployed, and customers start using the developed system, following 3 activities occur

Bug fixing , Upgrading application, Enhancement – Adding some new features

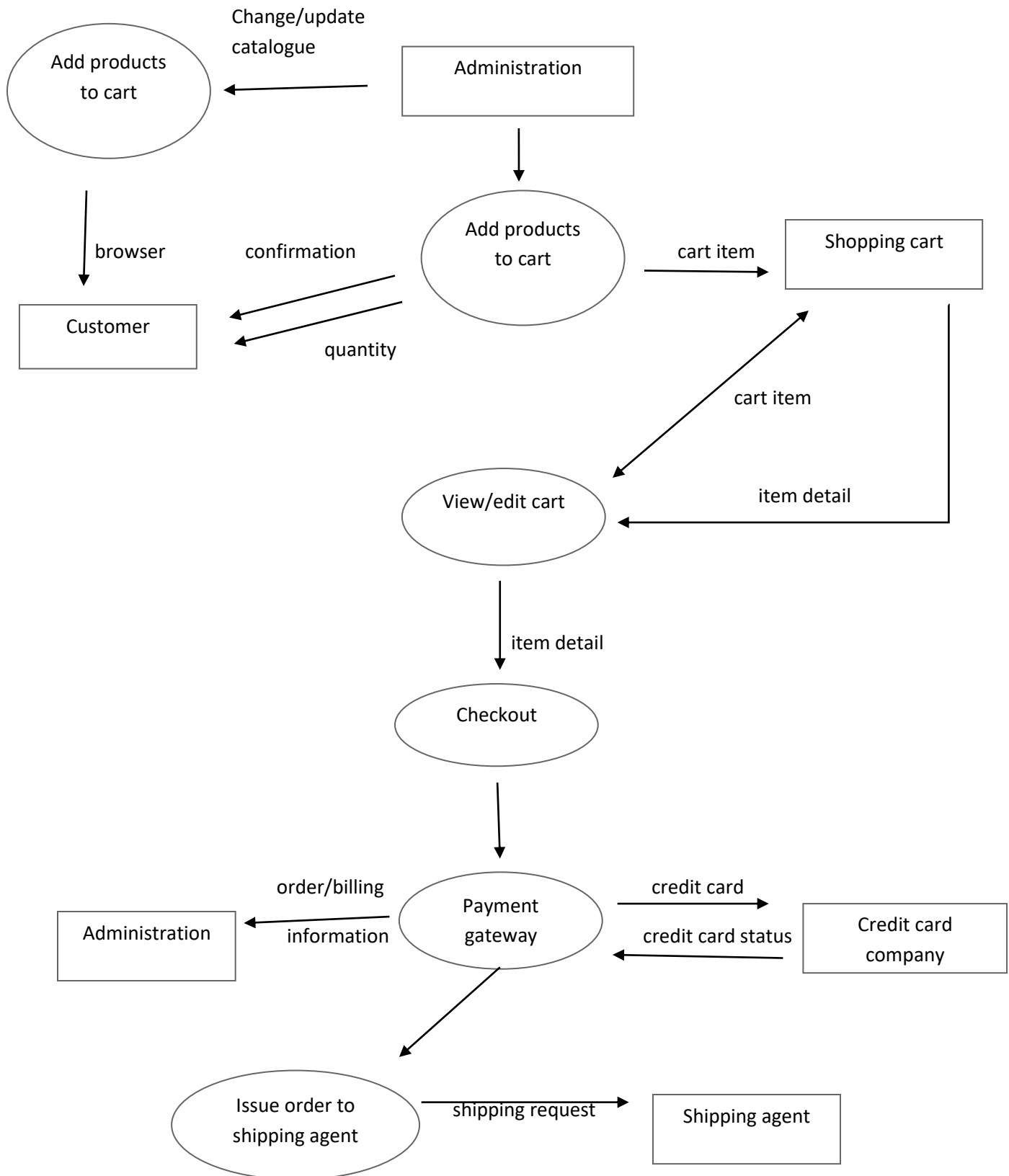
The main focus of this SDLC phase is to ensure that needs continue to be met and that the system continues to perform as per the specification mentioned in the f

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

**Ans :** A data flow diagram is a graphical view of how data is processed in a system in terms of input and output. The Data flow diagram (DFD) contains some symbol for drawing the data flow diagram.

The flow of data of a system or a process is represented by DFD. It also gives insight into the inputs and outputs of each entity and the process itself. DFD does not have control flow and no loops or decision rules are present

DFD on flipkart.



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

**Ans:** Flowcharts are nothing but the graphical representation of the data or the algorithm for a better understanding of the code visually. It displays step-by-step solutions to a problem, algorithm, or process.

1.START

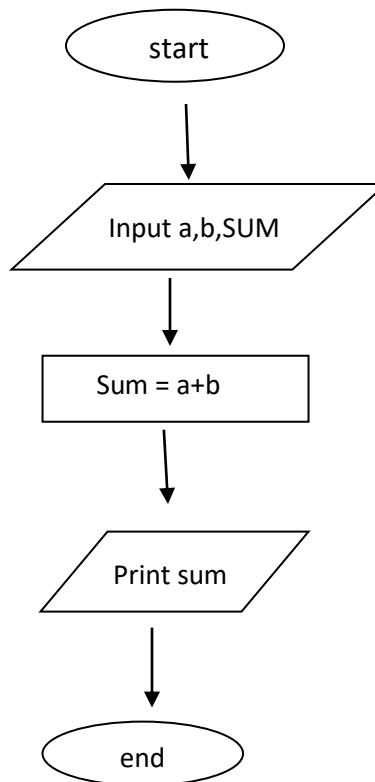
2.Declare variable a, b and sum.

3.read value a and b.

4.add a and b and assign the result to a variable sum.

5.print sum.

6.stop.



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

**Ans:** Use-case diagrams describe the high-level functions 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

