Q.1 What is software?

Ans: Software is **a set of instructions, data or programs used to operate computers and execute specific tasks.**

Q.2 What is software engineering?

Ans: Software engineering is the **branch of computer science that deals with the design, development, testing, and maintenance of software applications.**

Q.3 What is SDLC?

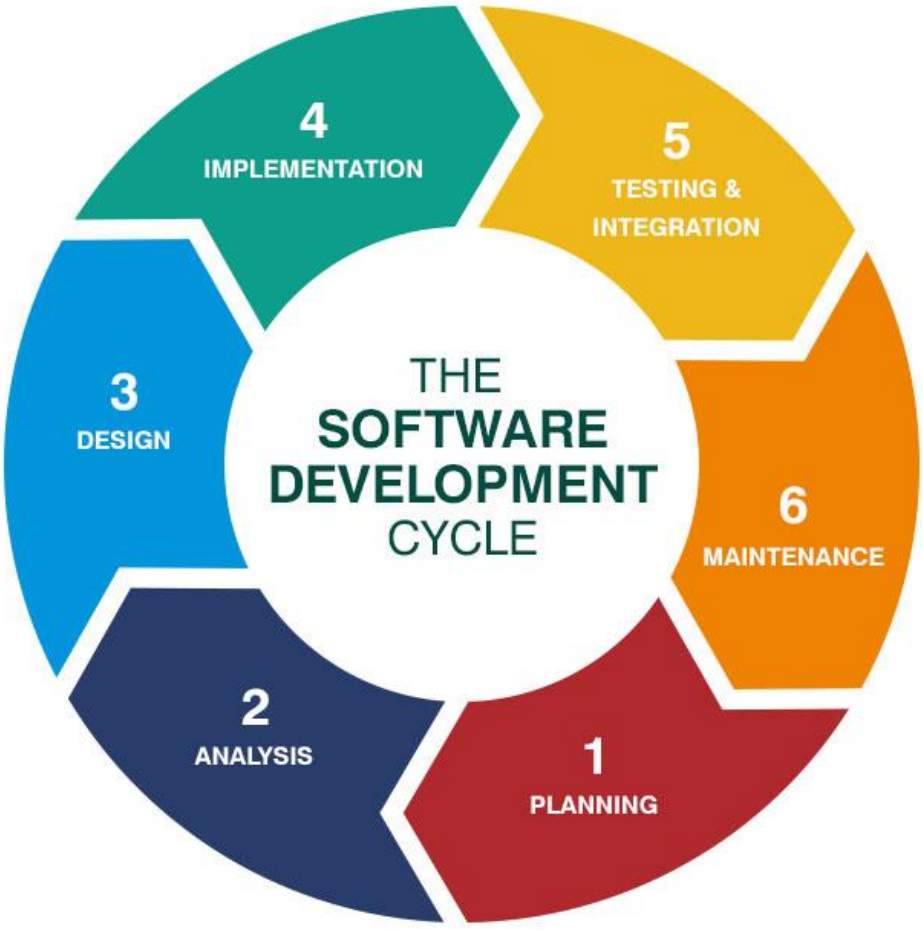
Ans: The software development lifecycle (SDLC) is the cost-effective and time-efficient process that development teams use to design and build high-quality software.

Q.4 Explain each phase of SDLC

Ans: SDLC consists of various phases, such as planning, design, coding, testing, and deployment, while STLC has different phases, such as test

planning, test case development, test execution, and test closure.

SDLC MODEL



SDLC PHASE

Plan: -

In this phase, the project's feasibility is assessed, requirements are gathered, and a high-level plan is developed. Goals, timelines, budgets, and resources are defined.

Analysis: -

During this phase, detailed requirements are gathered from stakeholders. Business rules and processes are analyzed, and the functional and non-functional requirements are documented.

Design: -

The design phase involves converting the requirements gathered in the analysis phase into a detailed system design. Architecture, database schemas, software modules, interfaces, and other system specifications are defined.

Implementation: -

In this phase, actual coding of the software system takes place. Developers write code according to the design specifications. It involves programming, unit testing, and integration testing.

Testing & Integration: -

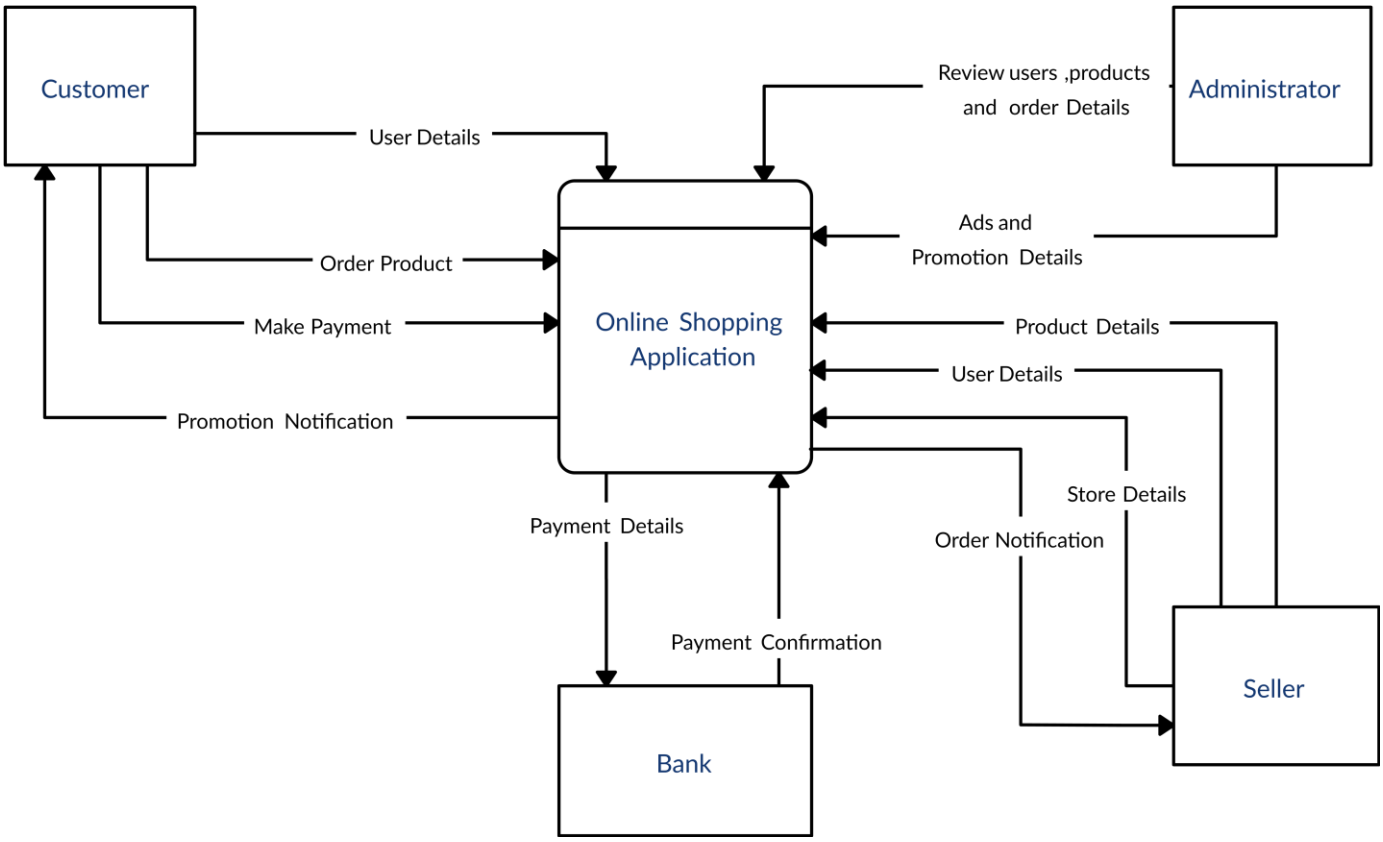
Testing phase involves thorough validation and verification of the software to ensure it meets the specified requirements. Different types of testing such as unit testing, integration testing, system testing, and acceptance testing are conducted.

Maintenance: -

After deployment, the software enters the maintenance phase where it is regularly updated, patched, and enhanced to address issues, accommodate changes, and adapt to new requirements over time. This phase ensures the longevity and reliability of the software system.

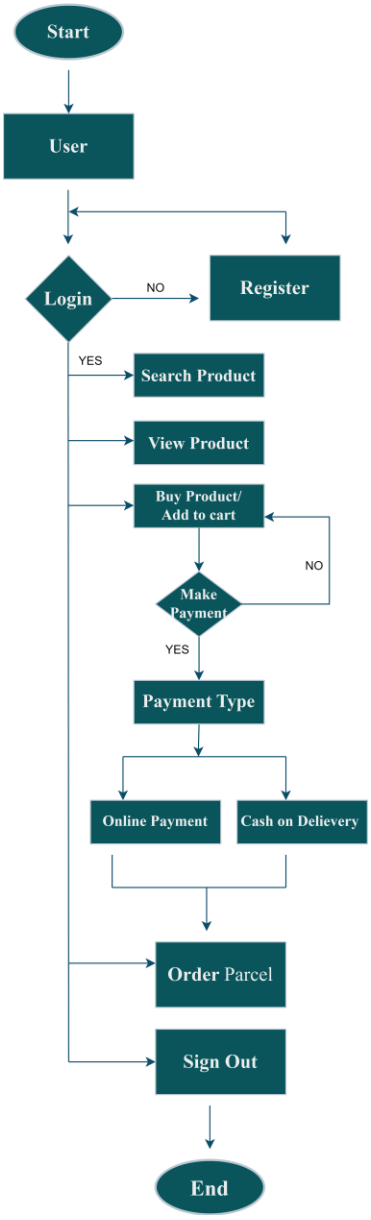
Q.5 What is DFD? Create a DFD diagram on Flipkart

ANS: **DFD** is the abbreviation for **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. Specific 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.



Q.6 What is Flow chart? Create a flowchart to make addition of two numbers

ANS: A flowchart is a picture of the separate steps of a process in sequential order. It is a generic tool that can be adapted for a wide variety of purposes, and can be used to describe various processes, such as a manufacturing process, an administrative or service process, or a project plan.



Q.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.