1. What is software? What is software engineering .

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

Software is a set of instructions ,data or programs used to operate computers and execute specific tasks . it is the opposite of hardware, which describes the physical aspects of a computer. Software is a generic term used to refer to applications, scripts and programs that run on a device.

A software-defined approach shifts the logic and intelligence traditionally embedded in the hardware itself to software. In many industries the hardware is already managed independently from the software infrastructure running it.it is equally isolated from the data management and from the applications management.

In a computer system , the software is basically a set of instructions or commands that tell a computer what to do. In other words, the software is a computer program that provides a set of instructions to execute a user’s commands and tell the computer what to do. For example like MS-word, MS-Excel, power point.

2. Explain types of 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 ... While **application software** is designed for end-users, and system software is designed for computers or mobile devices, programming software is for computer In addition, the system software also establishes a platform to run the **application software**. System software allows users a variety of options to interact with ...

System **software** is designed to run a computer's hardware and provides a platform for applications to run on top of. Other types of **software** include **programming** ... Computer **software** is an application made of **programming** codes to be executed in a computer processor. This is what Computer **software** is all about. Computer ... It is of mainly two types, namely System **software** and Application **software**. System **software** is a set of computer programs that is designed to manage system ...

3. What is SDLC? Explain each phase of SDLC

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. An SDLC (software development life cycle) is a big-picture breakdown of all the steps involved in software creation (planning, coding, testing, deploying, etc.). Companies define custom SDLCs to create a predictable, iterative framework that guides the team through all major stages of development.

SDLC is the acronym of Software Development Life Cycle. It is also called as Software development process. The software development life cycle (SDLC) is a framework defining tasks performed at each step in the software development process. This SDLC methodology establishes procedures, practices, and guidelines governing the initiation, concept development, planning, requirements analysis, design, development, integration and test, implementation, and operations, maintenance and disposition of information systems (IS) within the DOJ.

The developers build the code, test, integrate and manage. It is the longest phase of SDLC because all the development takes place in this phase.

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

Use Creately's easy online diagram editor to edit this diagram, collaborate with others and export results to multiple image **formats**. You can easily edit this ... A data flow diagram (DFD) is A data flow diagram for eCommerce is used to depict the overall data flow in an E-COMMERCE WEBSITE SYSTEM. The data flow diagram for eCommerce illustrates how the project will handle the included data. It comprises three illustrations, which are represented by DFD Levels.

There are two distinct types of data flow diagrams: the logical DFD and the physical DFD. Logical DFDs take the perspective of the business or its activities, looking at what information is moving through the system.

A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination. In summary, DFD and Flowchart are two diagram types that help to develop software. The main difference between DFD and Flowchart is that DFD is a graphical diagram that represents the data flow of a system while a flowchart is a graphical diagram that represents the sequence of steps to solve a problem.

The DFDs are use to :  
(i) discuss with the user a diagrammatic interpretation of the process in the system and clarify what is currently being performed. (ii) determine what the new system should be able to do and what information is required for each different process the should be carried out.

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

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.

**Algorithm to addition of two numbers in C++**

1. Step 1: Start.
2. Step 2: Declare three variables: num1, num2, and sum.
3. Step 3: Read the first number (num1) from the user.
4. Step 4: Read the second number (num2) from the user.
5. Step 5: Add num1 and num2 and store the result in the sum variable (sum = num1 + num2).

When we add, we combine numbers together to find the total. When adding, always line up the addends, the two numbers being combined, one on top of each other according to their place values.

A flowchart is a graphical representation of the steps a program takes to process data. In this, we can use several geometric patterns to illustrate the numerous actions the program carries out. With the help of the flowchart, the designer can efficiently segregate the various elements of the process.

A simple flowchart, which shows what to do, when a lamp does not work. The flow chart uses boxes, arrows and other elements: Boxes show the process operations, the various steps and actions. Arrows show the order of the steps, and/or different options.

In Microsoft Word, PowerPoint, or Excel, you have two options for creating flowcharts. You can either use SmartArt or Shapes from the Insert tab. Within SmartArt, you'll find an array of graphic options to choose from. Process is usually a good option for flowcharts, but the choice is yours.

There's no technical reason you cannot have as many start and stop points as you want in a flowchart. However, you need to think about what information you are trying to convey and who the audience of the flowchart is.

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

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 diagrams illustrate and define the context and requirements of either an entire system or the important parts of the system.

**How to Draw a Use Case Diagram?**

1. Identify the Actors (role of users) of the system.
2. For each category of users, identify all roles played by the users relevant to the system.
3. Identify what are the users required the system to be performed to achieve these goals.
4. Create use cases for every goal.
5. Structure the use cases.

The Use Case Diagram for the Banking System outlines the various use cases involved in using the banking system. One of the key use cases is opening an account. This involves creating a new account for a customer, which includes collecting personal information, such as name, address, and contact details.

A use case diagram is a graphical depiction of a user's possible interactions with a system. A use case diagram shows various use cases and different types of users the system has and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses.

The four main components of a use case diagram are actors, systems, relationships, and use cases. Actors are any human or external system that interacts with the system. Systems are the main components of the system being modeled. Relationships show how the actors and systems interact with each other.