MODULE:1 (SDLC)

1. What is software? What is software engineering?

→Software is the language of computer. It is a collection of computer programs and related data that provide the instructions for telling a computer what to do and how to do it. It's like human language.

→ Software is a program or set of programs containing instructions which provide desired functionality. Engineering is process of designing and building something that ensure particular purpose.

2. Explain types of software.

1) System software or OS:

→Provides the basic functions for computer usage and helps to run the computer hardware and system. It's the software used by the computer to translate inputs from various sources into a language which a machine can understand.

Ex- Linux, window, macOS, Android, iOS

2) Application software:

→It is the general designation of computer programs for performing user tasks.

→ Types of application software are:

1)Mobile app: Application that run on mobile

Ex. Instagram, twitter, etc

2) Desktop app: That run stand-alone in a desktop or laptop computer.

Ex. Microsoft office suite which includes Word, Excel and PowerPoint

3) Web app: That run on a web browser

Ex. google.com, facebook.com, etc

2) Programming software: It is the process of designing, writing, computer programs. It is basic in a programming language.

Ex.

C++, html, java, Python and Visual basic.

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

→SDLC means Software Development Life Cycle.

→ SDLC is a structure imposed on the development of a software product that defines the process for planning, implementation, testing, documentation, deployment, and ongoing maintenance and support.

✶ SDLC Phases

→Ther are 6 types of SDLC Phases:

1. Requirements Collection/Gathering (Establish Customer Needs)
2. Analyses (Model and Specify the requirements, What)
3. Design (Model and Specify a Solution, Why)
4. Implementation (Construct a Solution In Software)
5. Testing (Validate the solution against the requirements)
6. Maintenance (Repair defects and adapt the solution to the new requirements)

1.Requirements Collection/Gathering:

→Validation is needed throughout the software lifecycle, not only when the final system is delivered.

→Build constant feedback into the project plan.

2. Analysis Phase:

→This analysis represents the “what” phase.

→This phase defines the problem that the customer is trying to solve.

3.Design Phase:

→Design Architecture Document

→Implementation Plan

→The Design team can now expand upon the information established in the requirement Document.

4. Implementation Phases:

→In the implementation phase, the team builds the components either from scratch or by composition.

→Given the architecture document from the design phase and the requirement document from the analysis phase, the team should build exactly what has been requested, though there is still room for innovation and flexibility.

5.Testing Phase:

→Testing It is much easier to explain to a customer why there is a missing feature than to explain to a customer why the product lacks quality phase.

→Quality is a distinguishing attribute of a system indicating the degree of excellence.

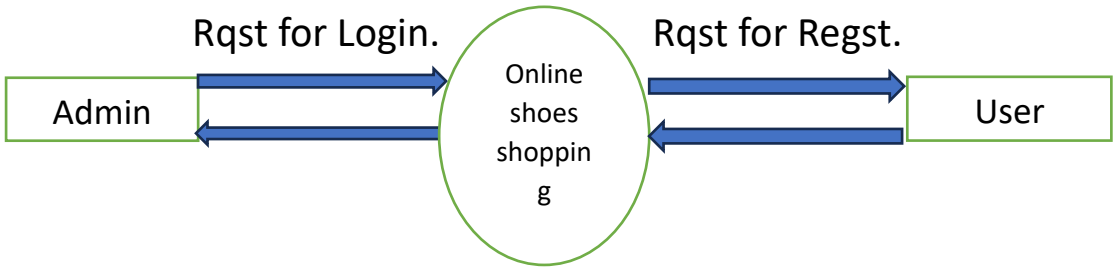
6. Maintenance Phase:

→The developing organization or team will have some mechanism to document and track defects and deficiencies.

→Software maintenance is also one of the phases in the System Development Life Cycle (SDLC), as it applies to software development.

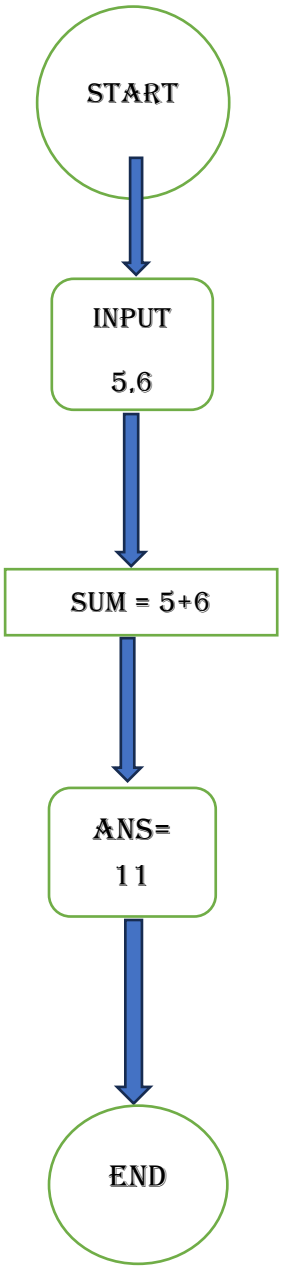
4. What is DFD? Create a DFD diagram on Flipkart.

→A Data Flow Diagram (DFD) is a traditional way to visualize the information flows within a system. A neat and clear DFD can depict a good amount of the system requirements graphically. It can be manual, automated, or a combination of both.



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

→Flow chart is a picture of the separate steps of a process in sequential.



6.What is use-case diagram? Create a use-case on bill payment on Paytm?

→A use-case diagram is a visual representation of the interactions between users and a system, depicting the various ways the users can use the system.