**MODULE-1**

**Q1. What is software? What is software engineering?.**

**Ans-**

**Software-**Software is a program or set of programs containing instructions that provide the desired functionality.

**Software Engineering -** 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.

**Q2. Explain types of software.**

**Ans-**

**1)Application software**-An application is software that fulfills a specific need or performs tasks.

Ex-The Microsoft suite- Office, Excel, Word, PowerPoint, Outlook.

Internet browsers- Firefox, Chrome, Safari, Internet Explorer.

Music software- Pandora, Apple Music, Spotify.

Communication software- Slack, Skype, Zoom, Team

**2)System software**-System software is designed to run a computer's hardware and provides a platform for applications to run on top of.

Ex-Operating system (os)-Android,Microsoft Windows

**3)Middleware**-Middleware is software that bridges the gap between applications and operating systems.

ex-Database,Message Oriented Middleware,Application Programming Interface,Transaction Processing etc.

**4)Driver software**-which operates computer devices and peripherals.

ex-Usb Driver,Audio Driver,Wi-Fi Driver.

**Q3.What is SDLC? Explain each phase of SDLC.**

Ans-

SDLC(Software Development Life Cycle) is to provides a well-structured flow of phases that help an organization to quickly produce high-quality software which is well-tested and ready for production use.

1)Plan-The planning phase typically includes tasks like cost-benefit analysis, scheduling, resource estimation, and allocation.

2)analyzes-ere, the project lead analyzes the product or client’s goals and decides on the features to aim for as a final goal

3)Design-In the design phase, software engineers analyze requirements and identify the best solutions to create the software.

4)Implement-In the implementation phase, the development team codes the product. They analyze the requirements to identify smaller coding tasks they can do daily to achieve the final result.

5)Test-The development team combines automation and manual testing to check the software for bugs.

6)Deployment-The deployment process starts once the testing phase is over and there are no bugs or errors in the development backlog.

7)Maintain-In the maintenance phase, among other tasks, the team fixes bugs, resolves customer issues, and manages software changes. In addition, the team monitors overall system performance, security, and user experience to identify new ways to improve the existing software.

**Q4. What is DFD? Create a DFD diagram on Flipkart.**

Ans-

DFD is the abbreviation for Data Flow Diagram. The flow of data in a system or process is represented by a Data Flow Diagram (DFD). It also gives insight into the inputs and outputs of each entity and the process itself.

SHOPPING CART

SELECT ITE SELECT ITEM CART ITEM

CUSTOMER

**ITEM DETAILS**

CREDIT CARD COMPANY

**SEND RECEIPT** **POST PAYMENT**

ACCOUNTING

**BILLING INFO RECEIVE MONY**

INVENTORY

**SHIPPING REQUEST**

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

Ans-A flowchart is a diagram that depicts a process, system or computer algorithm.

START

STOP

INPUT NUM1,NUM2

PROCESS

=NUM1+NUM2

OUTPUT

IF OUTPUT IS NOT PROPER

Q6. What is Use case Diagram? Create a use-case on bill payment on paytm.

Ans-A Use Case Diagram is a vital tool in system design, it provides a visual representation of how users interact with a system. It serves as a blueprint for understanding the functional requirements of a system from a user’s perspective, aiding in the communication between stakeholders and guiding the development process..

PAYTM

USER

PAYTM

ADMIN