MODULE : 1

1.what is software? What is software engineering?

The software can be best defines a set of instruction, technically referred to as programs, that perform operations and specific tasks based the commands of the user.

**Software engineering is the branch of computer science that deal with the DESIGN, DEVELOPMENT,testing and maintenance of software applications.**

2.Explain type of software

<A> System software

1.operating system

2.drivder software

System software is a program designed to run a computer’s hardware and applications and manage its resources, such as its and manage its resource, such as its memory, processors and devices.

<B> Application software

specific Application software are designed to accomplish tasks for purposes.

A computer can easily run without application software.

Application software depend on system software and cannot run without system software.

<C> Utility software

1.cam

2.cad

Specifically designed to help manage and tune the computer hardware, operating system or application software, and perform a single task or a small range of tasks.

3.What is SDLC? Explain each phase of SDLC

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

<A>**Planning**

The planning phase of the SDLC is also when the project plan is developed that identifies, prioritizes, and assigns the tasks and resources required to build the structure for a project.

<**B>Analysis**

The analysis phase in the software development life cycle (SDLC) is a crucial stage that involves gathering, understanding, and documenting the requirements of a software project.

**<C>Designing**

The design phase of the Software Development Life Cycle (SDLC) is a critical step in developing the conceptual blueprint of a software project. This phase involves transforming the software requirements gathered during the Requirements Analysis phase into a structured design document.

<D>Implementation

In this phase, the actual coding and development of the software system take place based on the detailed design specifications. Developers write code, integrate components, and conduct unit testing.

<E>Testing

Once the developers build the software, then it is deployed in the testing environment. Then the testing team tests the functionality of the entire system. In this fifth phase of SDLC, the testing is done to ensure that the entire application works according to the customer requirements.

<F>Maintenance

The maintenance phase of the SDLC occurs after the product is in full operation. Maintenance of software can include software upgrades, repairs, and fixes of the software if it breaks.

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

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.

DFD DIAGRAM

FLIPKART DFD

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CUSTOMER -----> REGISTRATION

PRODUCT SEARCH -----> ORDER PLACEMENT

PAYMENT PROCESS <----- PAYMENT GATEWAY

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

A flowchart is a diagram depicting a process, a system or a computer algorithm. It is a diagrammatic representation of the solution to a given problem but, more importantly, it provides a breakdown of the essential steps to solving the problem.

START

NUM1, NUM2

NUM1 >NUM2

NUM 2 IS BIG

NUM 1 IS BIG

END

5. 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 a system and its users to capture the system's functionalities or features from a user's perspective. It illustrates the different ways users interact with a system to achieve specific goals.

USE CASE DIAGRAM: PAYMENT SERVICE USE CASE DIAGRAM

USER ----->

* REGISTRATION
* SELECT BILL TYPE
* BILL DETAILS
* PAYMENT METHOD
* PAYMENT GATEWAY
* PAYMENT PROCESS
* PAYMENT CONFORMATION