MODUAL : 1

Q : 1 What is software? What is software engineering?

ANS =

Software

Software is nothing but set of instruction or set of program are known as software

Types of software :

1. System software
2. Programing software
3. Android software
4. Middleware
5. Driver software
6. System software

These software programs are designed to run a computer’s application

Programs and hardware

System software coordinates the activities and function of the hardware and software

The example of system software like chrom , calculator ,play store etc..

1. Programing software

Computer’s programmers use of programing software write code.

Programing software and programing tool enable developers to develop , write , test and debug other software programing

Programing software like visual studio code , atom , dev c++ etc..

1. Android software

The most common type of software application software is a computer package that performs a specific function for use or in some case for other application

4 ) driver software

Also known as device drivers , this software is often considered a type of system software.

Device drivers control the device and peripherals connected to a computer enabling them to perform their specific tasks.

Driver software example like audio driver.

5) Middleware

It is also use to send a remote work request from an application in a computer that has one kind of os , to an application in a computer with a different os , it also enable newer application to work with legacy ones.

Software engineering

Software engineering is the discipline concerned with designing, creating, testing, and maintaining software applications and systems. It involves applying engineering principles to software development to ensure that the resulting software is reliable, efficient, maintainable, and scalable.

Software engineering encompasses various activities, including requirements analysis, software design, coding, testing, deployment, and maintenance. It involves using various methodologies, such as agile, waterfall, or DevOps, to manage the software development process efficiently.

Key aspects of software engineering include:

1. \*\*Requirements Engineering\*\*: Gathering and analyzing requirements from stakeholders to understand what the software needs to accomplish.

2. \*\*Software Design\*\*: Creating a blueprint or plan for the software system, including architecture, data structures, and algorithms.

3. \*\*Coding\*\*: Implementing the design by writing code in programming languages.

4. \*\*Testing\*\*: Evaluating the software to ensure that it meets its requirements and functions correctly. This includes both manual and automated testing.

5. \*\*Deployment\*\*: Releasing the software for use by end-users, which may involve installation, configuration, and integration with other systems.

6. \*\*Maintenance\*\*: Making updates and improvements to the software to address bugs, add new features, or adapt to changes in requirements or technology.

Software engineering requires a combination of technical skills, such as programming, software design, and testing, as well as soft skills, such as communication, problem-solving, and teamwork. It is essential for developing high-quality software that meets the needs of users and organizations effectively.

Q : 2 Explain types of software

The types of software is five like ,

1. Application software
2. Middleware
3. System software
4. Programming software
5. Driver software

Now let’s defind it …

1. System software

These software programs are designed to run a computer’s application

Programs and hardware

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The example of system’s software like chrome , calculator ,play store etc..

1. Programing software

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Q:3 What is SDLC? Explain each phase of SDLC

The software developers life cycle (SDLC) . it’s useful for beginners to create high quality software

SDLC method focus on five phase following ways

1. Requirement gathering
2. Analysis
3. Designing ( front - end department)
4. Implementation (coding ) (backend end developer)
5. Testing
6. Maintenance
7. Requirement gathering

The purpose of any software is studied and information is obtained from the client, information is obtained from the client about the type of software that the client wants to be developed, information research is done about the budget, why they want to use it. is obtained

1. Analysis

In the research, if a similar software is made first, it is studied how that software works, what are the advantages of the software, what are its limitations, etc. After studying the limitations of the software, a new software is developed.

1. Designing

Designing is an important part of a software developer because it shows the external part of the software to the client which affects the client and any software developer has to design the software keeping the client's needs in mind.

1. Implementation

The fourth important part of the software developer is coding, in which the software has to be created keeping in mind the client's requirements and the job of the coding department is to see if the software is working properly or not, and also to improve the software if it is not working properly. Coding department has to do.

1. Testing

After the complete software is made, it is the job of the software tester to check the software.

1. Maintenance

Then it is improved keeping in mind the client's future requirements.

Q: 4 What is DFD? Create a DFD diagram on Flipkart

DFD stands for Data Flow Diagram. It's a graphical representation that shows how data flows through a system. DFDs are commonly used in software engineering and business analysis to understand and document the flow of data within an organization or system.

Creating a DFD for a complex system like Flipkart would involve multiple levels of detail, but here's a simplified example of a DFD diagram for Flipkart:

Level 0 DFD for Flipkart:

```

+---------------------------+

| Flipkart |

+--------------+------------+

|

|

v

+-----------------------------+

| Order System |

+--------------+--------------+

|

|

v

+-------------------------------+

| Payment Gateway |

+--------------+----------------+

|

|

v

+--------------------------+

| Inventory System |

+--------------------------+

```

This Level 0 DFD provides an overview of Flipkart's main components: the Order System, Payment Gateway, and Inventory System. Each of these components can be further elaborated into more detailed DFDs at Level 1 and beyond to show more specific processes and data flows within each subsystem.

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

A flowchart is a visual representation of a process or algorithm using different shapes and arrows to depict the steps involved and the flow of control.

Here's a simple flowchart to illustrate the process of adding two numbers:

```

Start

|

v

Enter first number (A)

|

v

Enter second number (B)

|

v

Add A and B

|

v

Display the result

|

v

Stop

```

In this flowchart:

- "Start" and "Stop" are terminal symbols indicating the beginning and end of the process, respectively.

- "Enter first number (A)" and "Enter second number (B)" are input/output symbols where the user inputs the two numbers.

- "Add A and B" is a process symbol where the addition operation is performed.

- "Display the result" is another input/output symbol where the result of the addition is shown to the user.

The arrows between the symbols indicate the flow of control, guiding the reader through the sequence of steps to perform the addition of two numbers.

Q:6 What is Use case Diagram? Create a use-case on instagrame

It seems like you're asking for a diagram related to Paytm, a popular Indian digital payment platform. However, you haven't specified the type of diagram you're interested in. Here are a few possibilities:

1. **System Architecture Diagram**: This diagram could show how Paytm's system is structured, including servers, databases, and other components.
2. **User Flow Diagram**: This type of diagram could illustrate the steps a user takes to perform a transaction or use a feature within the Paytm app or website.
3. **Payment Process Flow Diagram**: This could show the flow of a payment transaction, including steps such as initiating a payment, verifying details, and confirming the transaction.
4. **Ecosystem Diagram**: This type of diagram could illustrate Paytm's position within the broader digital payment ecosystem, including users, merchants, banks, and other stakeholders.

