# Module 1: Overview of IT Industry

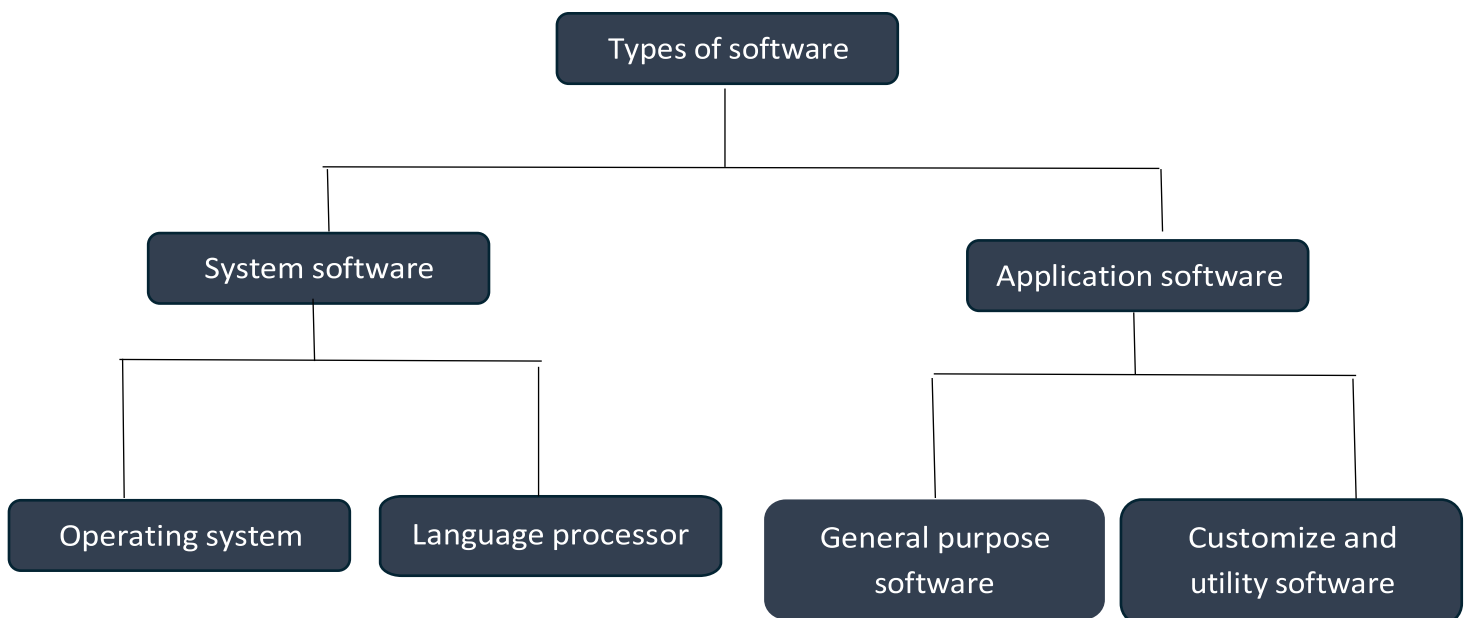## Que 1: What is software? What is software engineering?

**Ans:**

Software: Software is a computer program that provides a set of instructions to execute users command and tell the computer what to do.

Software engineering: Software engineering is a process of developing, designing, testing, and maintaining of software. It is a systematic disciplined approach to create high quality software. By using appropriate tools developer can create high quality, reliable, maintainable software that meets user requirements. Main goal of software engineering is to create software for improving quality, budget, and time efficiency.

## Que 2: Explain types of software.

**Ans:**



System software: It controls computers internal functions and also control hardware devices such as monitor, printer etc. it is like interface between hardware device and user application.

Operating system: It is main program of computer system. When system on it is the first software that loads in computer memory. It provides interface to user which helps user to interact with the computer. Ex: Ios, Windows, etc.

Language processor: As we know that system software converts human readable language into machine level language. So, the conversion is done by language processor.

Device driver: It is a software that control a device and help that device to perform properly. Every device needs a driver to connect with computer. So, when you connect new device to your computer you need to install driver so that operating system knows how to control that device.

Application software: Application software is designed to perform a specific task and fullfill user requirement.

General purpose software: It is used for perform different types of task. Ex. word , PowerPoint etc.

Customized software: It is used for perform specific task. Designed for specific organization. Ex. ERP, CRM , IRCTC etc.

Utility software: It is used to manage computer infrastructure. It is used to examine, manage, configure the system. Ex. Antivirus, disk manager etc.

## Que 3: What is SDLC? Explain each phase of SDLC.

**Ans:** It means Software development life cycle. SDLC used for develop high quality, maintainable software that meets user requirement. It is used to design, develop, and test good quality software. It defines the entire procedure of software development step by step.

Phases of SDLC:

| | |
|---|---|
| 1: Requirement gathering analyses. | 4: Testing. |
| 2: Design. | 5: Deployment. |
| 3: Implementation. | 6: Maintenance. |

1: Requirement gathering and analysis: In this phase gathering information about the software requirements from user.

2: Design: In this phase overall architecture of software, data structure created.

3: Implementation: It's also called as development phase. In this design is implemented in code. This is longest phase in SDLC.
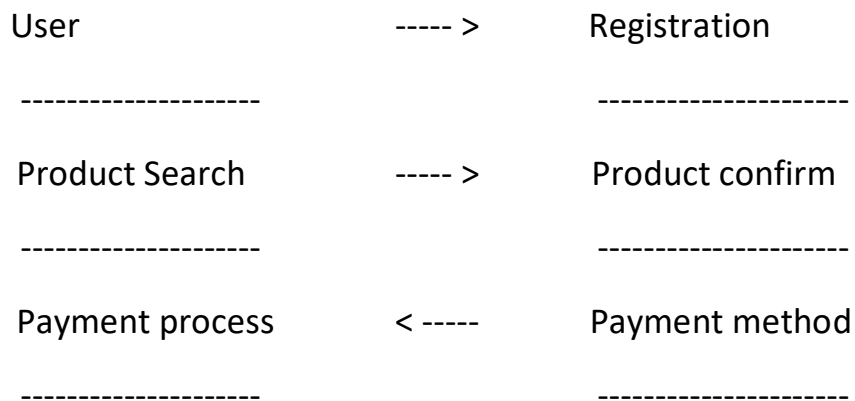
4: Testing: In this phase software is tested to ensure that it meets users requirement and work properly.

5: Deployment: After successful testing product is deployed and available to end user.

6: Maintenance: In this phase bug fixes, updates to the software, ongoing support.

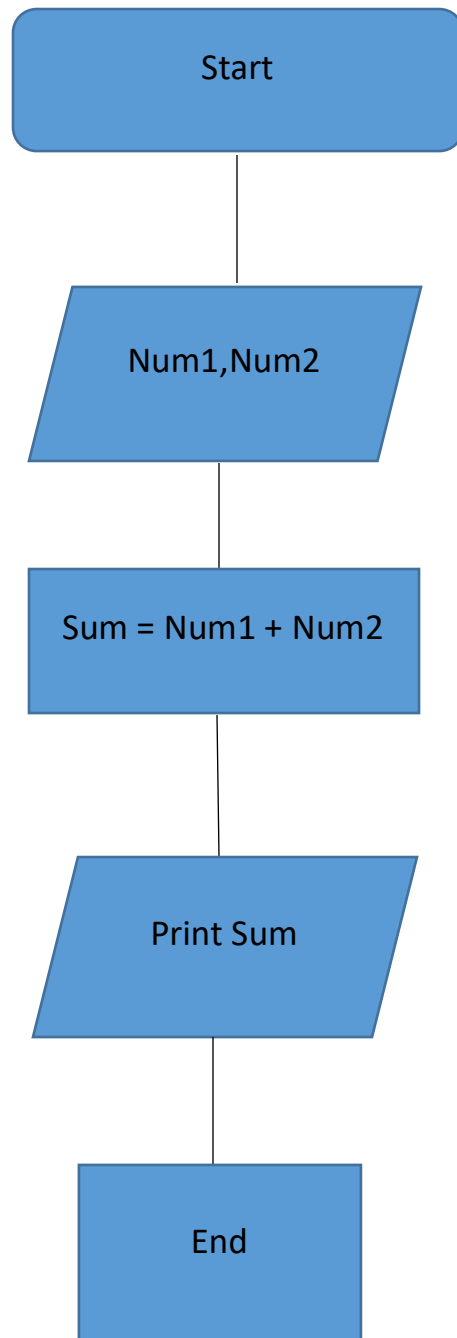## Que 4: What is DFD? Create DFD diagram on Flipkart.

**Ans:** DFD means Data flow diagram. It represents flow of data within system. It provides graphical representation of data flow. It is understood by technical and non-technical users.

User                        ----- >            Registration

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Product Search              ----- >            Product confirm

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Payment process             < -----            Payment method

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## Que 5: What is flowchart? Create a flow chart for addition of two numbers.

## Ans:

Flow chart is graphical representation of algorithm for better understanding. Its displays step by step solution to problem, algorithm or process.

```
Start

Num1,Num2

Sum = Num1 + Num2

Print Sum

End
```

**Que 6: What is use case diagram? Create a use case on bill payment on paytm.**

**Ans:** It is visual representation of how user interact with system. It is blueprint for understanding requirement of user.

User

Login

Billing Details

Payment Type

Payment Gateway

Payment Process

Payment Confirmation