

## **Assignment-1**

**1)What is software? What is software engineering?**

**ANS: -**

**Software: -**

Software is the output of the program i.e. the set of instructions, given by the programmer to perform or execute some tasks on computer.

Types of software: -

There are mainly 3 types of software namely 1) System software  
2) Application software 3) Utility software.

**Software Engineering: -**

The process of designing, developing and maintain the software systems is called software engineering. There is a systematic plan of this process which is called SDLC.

**2) Explain types of software.**

**ANS: -**

There are mainly 3 types of software which are listed below:

- 1) System software
- 2) Application software
- 3) Utility software.

1) System software: -

→ It includes operating system, device drivers etc.

Operating system like windows, macOS, Linux, Android, iOS etc.

Device drivers like Bluetooth driver, USB driver, etc.

2) Application software: -

→ It includes third party application like Microsoft suit, game, antiviruses etc.

3) Utility software: -

→ It includes Computer Aided Manufacturing (CAM) and Computer Aided Designing (CAD) etc.

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

**ANS:** -

SDLC is abbreviation for Software Development Life cycle. It is a process used by programmer to design, develop, test, and maintain the software's.

**Phases of SDLC:** -

1)Analysis: -

This phase focus on what software need to do. Functional and Non-functional Requirement's.

2)Planning: -

This phase focus on collecting resources needed to program a software.

3)Designing: -

This phase focus on designing the blueprint of software and then discuss it with clients for further modifications.

4)Development: -

This phase focus on writing actual code for developing the software based on the design specification. Also, this phase includes compiling of software.

#### 5)Deployment: -

This phase focus on testing and deployment of software. Testing is done in order to fix bugs and issues. And after testing the software is deployed where users can use it.

#### 6)Maintenance: -

This phase is the last phase of SDLC which comes after deployment phase and this phase mainly focuses on making update and improves the performance of software.

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

##### ANS: -

A Data Flow Diagram (DFD) give the flow of data through a system, showing how data is processed by a system in terms of inputs and outputs.

User → Registration

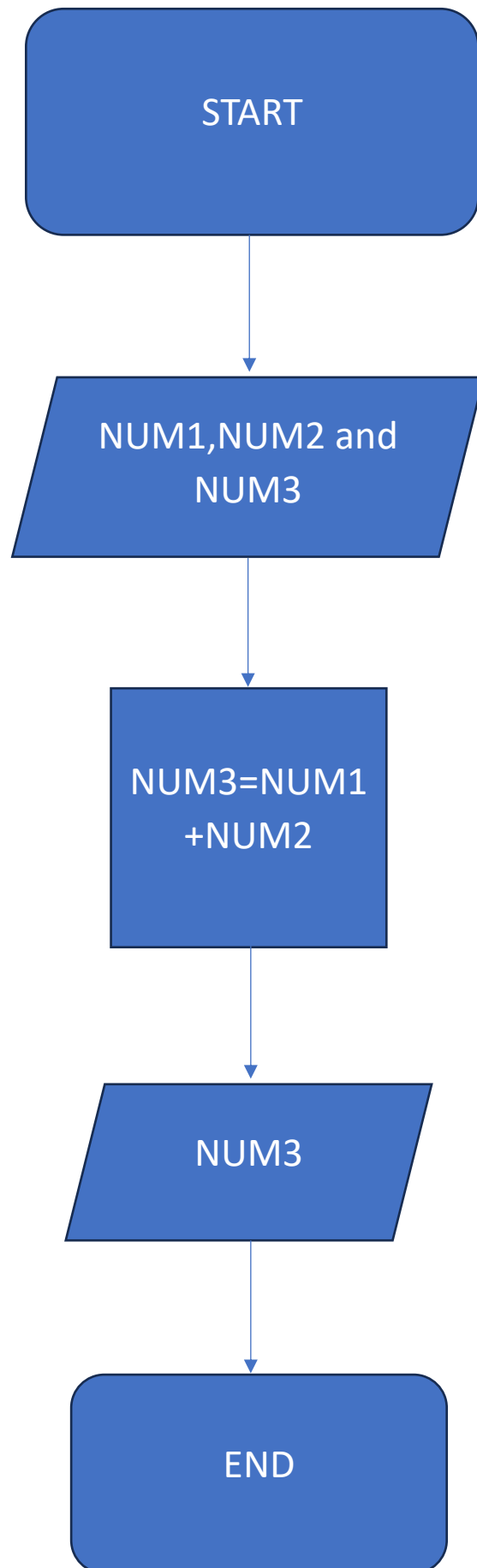
Product search → Product Confirm

Payment Process ← Payment Method

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

##### ANS: -

A flowchart is a diagram that shows how things happen step by step. It uses different shapes and arrows to represent actions and the order in which things should be done.



**6)What is Use case diagram? Create use-case on bill payment on Paytm.**

**ANS: -**

A Use Case Diagram is a type of diagram used in software engineering and systems design to show the interactions between users and the system itself.

Main components of UCD: -

- 1) Use case
- 2) Actor
- 3) Relationship

Use Case Diagram: -

Registration

USER → LOGIN

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Payment Type

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Bill details

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Payments Methods

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Payment Gateway

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Payments Process

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Payments Confirmation