

# Software Engineering Assignment

## Module : 1

### SE – Overview of IT Industry

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#### 1. What is software? What is software engineering?

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##### **Software :**

The software is a computer program that provides a set of instructions to execute a user's commands and tell the computer what to do. For example like MS-Word, MS-Excel, PowerPoint, etc.

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##### **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.

## **2. Explain types of software**

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### **Types of Software :**

- 1. System Software:** Manages hardware and basic system operations (e.g., Windows, macOS).
- 2. Application Software:** Helps users perform tasks like writing, browsing, and editing (e.g., Microsoft Word, Chrome).
- 3. Development Software:** Tools for writing and testing code (e.g., Visual Studio).
- 4. Driver Software:** Enables communication between the computer and hardware devices (e.g., printer drivers).

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

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The Software Development Life Cycle (SDLC) is a process used to design, develop, and test high-quality software. It ensures that software is built systematically and efficiently. The SDLC consists of several key phases like :

- 1. Planning:** Decide the project's goals and check If it is doable within Time and budget.
- 2. Requirements :** Gather detailed information on what the software needs to accomplish. Talk to stakeholders to understand their needs and document them
- 3. Design:** Create a detailed plan of how the software will look and work.
- 4. Implementation :** Write the actual code based on the design plan.
- 5. Testing:** Check the software for bugs and make sure it works properly or not.
- 6. Deployment:** Make the software available for users to use.
- 7. Maintenance:** Fix issues, Updates properly, and improve the software time to time after it's been deployed.

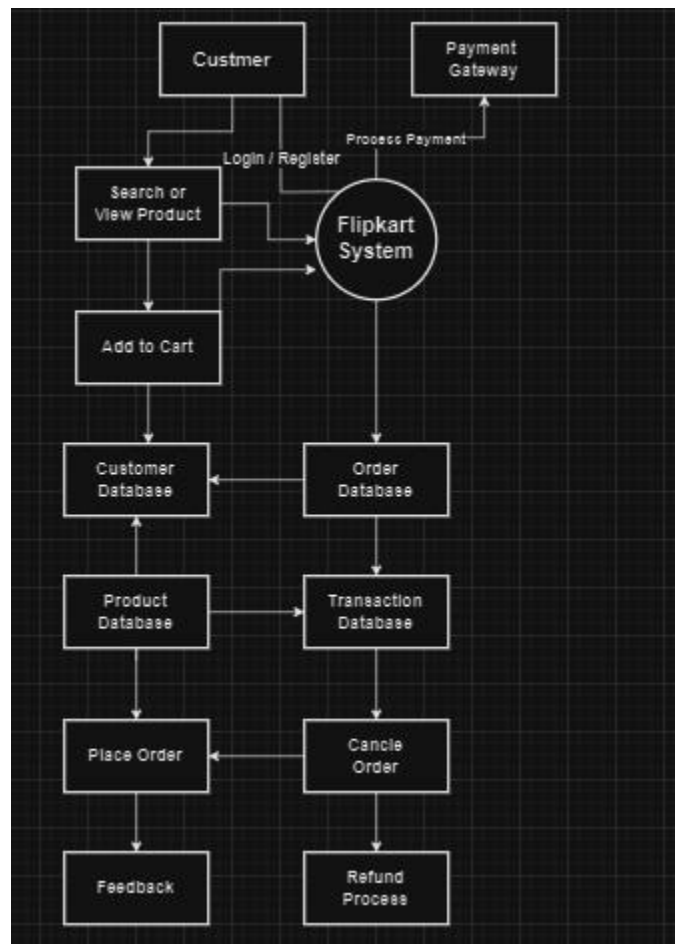
This process helps ensure that the final product will being high-quality and it will complete user's expectations.

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

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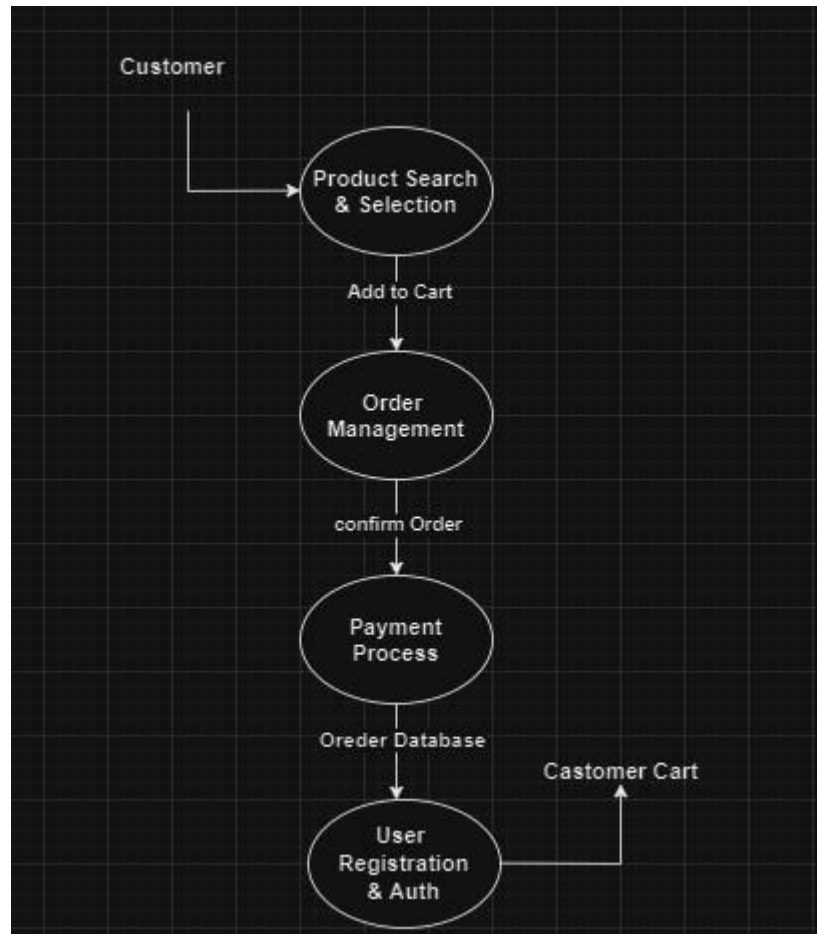
DFD stands for Data Flow Diagram. It represents the flow of data within information systems. DFD provide a graphical representation of the data flow of a system that can be understood by both technical and non-technical users. The models enable software engineers, customers, and users to work together effectively during the analysis and specification of requirements.

0 - level DFD Diagram

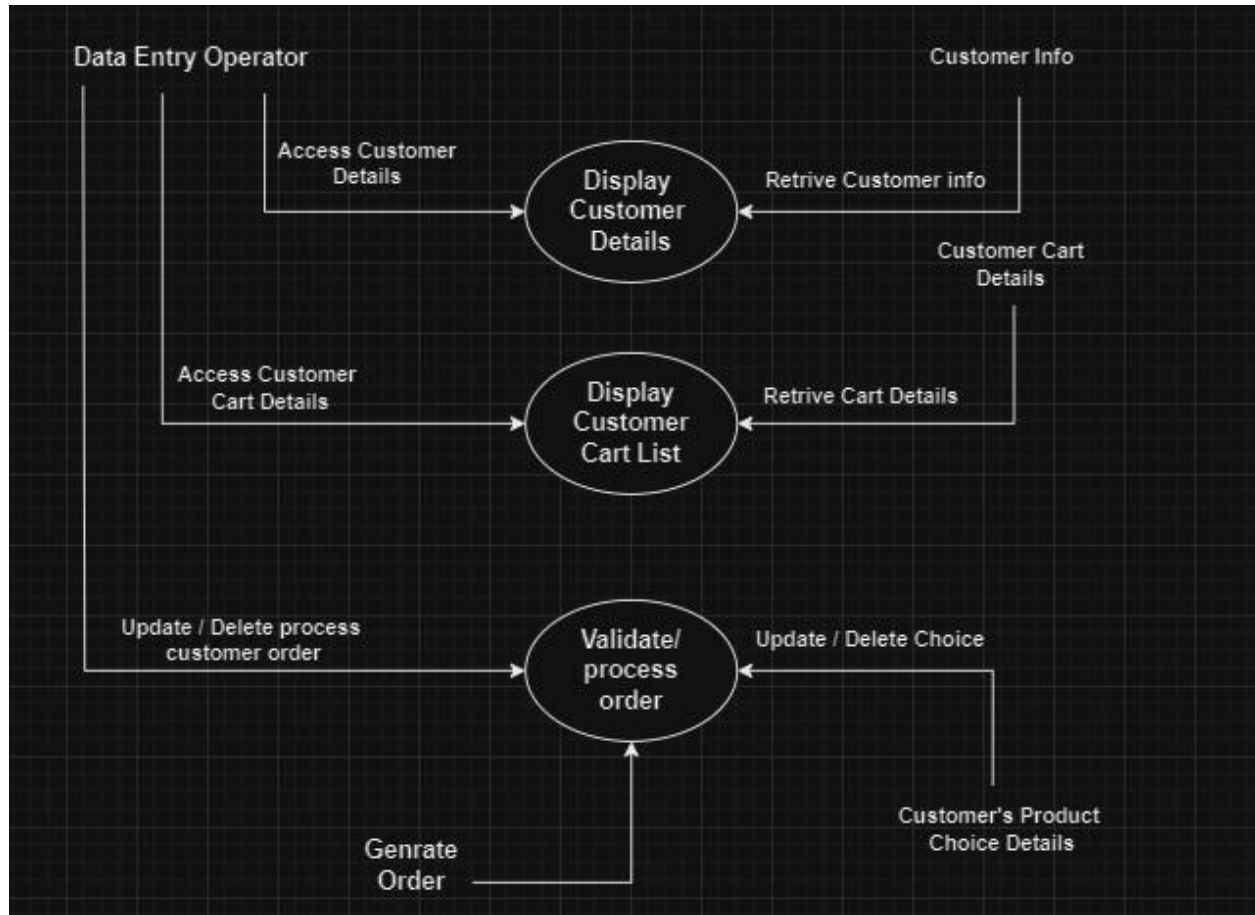


DFD Diagram on Flipkart System

## 01 - level DFD Diagram



## 02 – level DFD Diagram



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

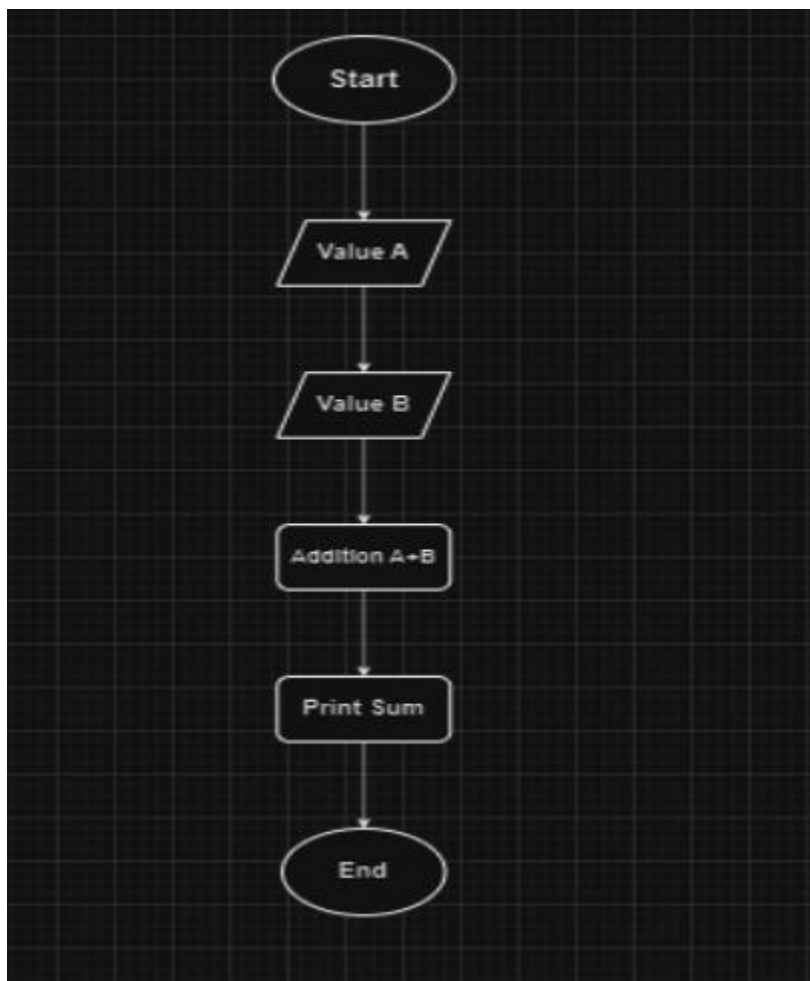
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### Flow Chart :

Flowcharts are nothing but the graphical representation of the data or the algorithm for a better understanding of the code visually. It displays step-by-step solutions to a problem, algorithm, or process.

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flowchart to make addition of two numbers :



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

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A Use Case Diagram is a vital tool in any system design, It provides a visual representation of how user interact with a system. It serves as a blueprint for understanding the functional requirements of a system from a user's perspective.

### Use-Case on bill payment on paytm

