

## Overview of IT

1)what is software? what is software Engineering?

Answer:

- Software is set of instruction and command to execute computer or execute set of tasks.
- which describe the logical aspect of computer.

### **\*Software Engineering:**

- software engineering is the process of designing, developing, testing, and maintaining software.
- it is Systematic and disciplined approach to software development that aims to create high quality, reliable, and manageable software.

2)Explain types of software.

- there are types of software.

## **\*Types**

- 1.Application Software
- 2.System Software
- 3.Driver software
- 4.middleware
- 5.programming software

### **1.Application Software:**

- A software which is made by developer is called Application software.
- Popular web browser like Google chrome, Firefox are example of Application software.
- In application software also available mobile app like WhatsApp, Instagram, Facebook.

### **2.System Software**

-System software is type of computer program that is designed to run a computer's hardware and application programs.

-It is in-built system.

-Ex: operating system (like Android, macOS, windows), notepad, calendar.

### **3.Driver software:**

-Also known as device driver.

-It controls the devices.

-Driver software is making communication between application and hardware.

-It is bridge between different components.

-Ex: keyboard, headphone, printer, USB devices etc.

### **4.middleware:**

- It mediates between application and system software or two application software.

-A web server is middleware that connects website to the backend database.

### **5.programming software:**

-Computer programmers use programming software to write code.

-Programming software and programming tools enable developers to develop, write, test, and debug other software programs.

-It includes compilers, assemblers, debuggers, interpreters.

-Ex: turbo c, visual studio, Eclipse.

3)what is SDLC? Explain each phase of SDLC.

Answer.

-SDLC stand for software development life cycle.

-SDLC is step by step process that is used to Design, Develop, and test good quality software.

-It is based on time and cost.

### **\*Phases of SDLC.**

1.planning

2.analysis

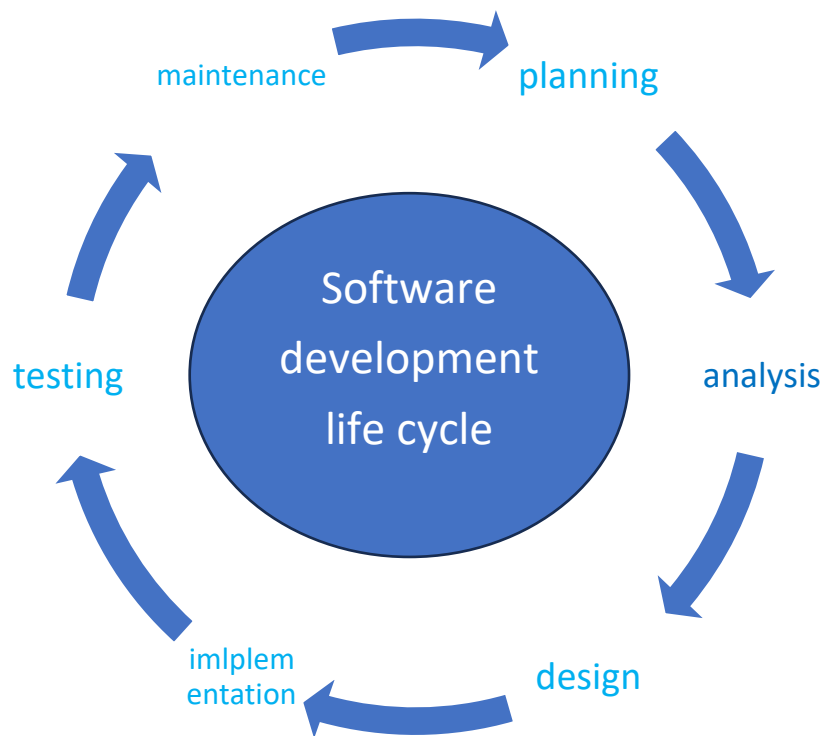
3.desing

4.implementation

5.testing and integration

6.maintanance

\*Diagram



-The main goal of SDLC is make good quality product which is manageable based on user's requirement.

### **1.planning-**

-In first phase you are gathering information from client is call planning.

-we decide timelines in planning for ensure the project is completed on time.

### **2.analysis-**

- Second phase is analysis.
- In analysis you have to get information about client requirement from client.
- And gathering materials and tools before starting to build.

### **3.design-**

- The design phase of software development life cycle is creating the design of project.
- In this phase, we create a detailed design of how the software will look and function.
- It's like making blueprint before building a house.
- Data Flow Diagrams (DFD), use case diagram and flow chart is available to design.

### **4.implementation-**

- This phase is start after the system's design is accepted by the user.
- The implementation phase involves putting the project plan into action.
- Developer write code based on the design.

## **5.testing & integration-**

- Once the software is ready then components are integrated and tested by testing team.
- This phase is useful for finding the bug and fixing the bug.
- It's like all code is working.

## **6.maintenance-**

- It is last stage of SDLC life cycle.
- Where the product is updated and fixed after it is released.
- Software needs maintenance to keep it running smoothly.
- It also adds new features in software.

3)what is DFD? create a DFD diagram on Flipkart.

**Answer:**

- A Data Flow Diagram (DFD) maps out the flow of information for any process or system.
- It is a graphical tool, useful for communicating with user, manager and other.

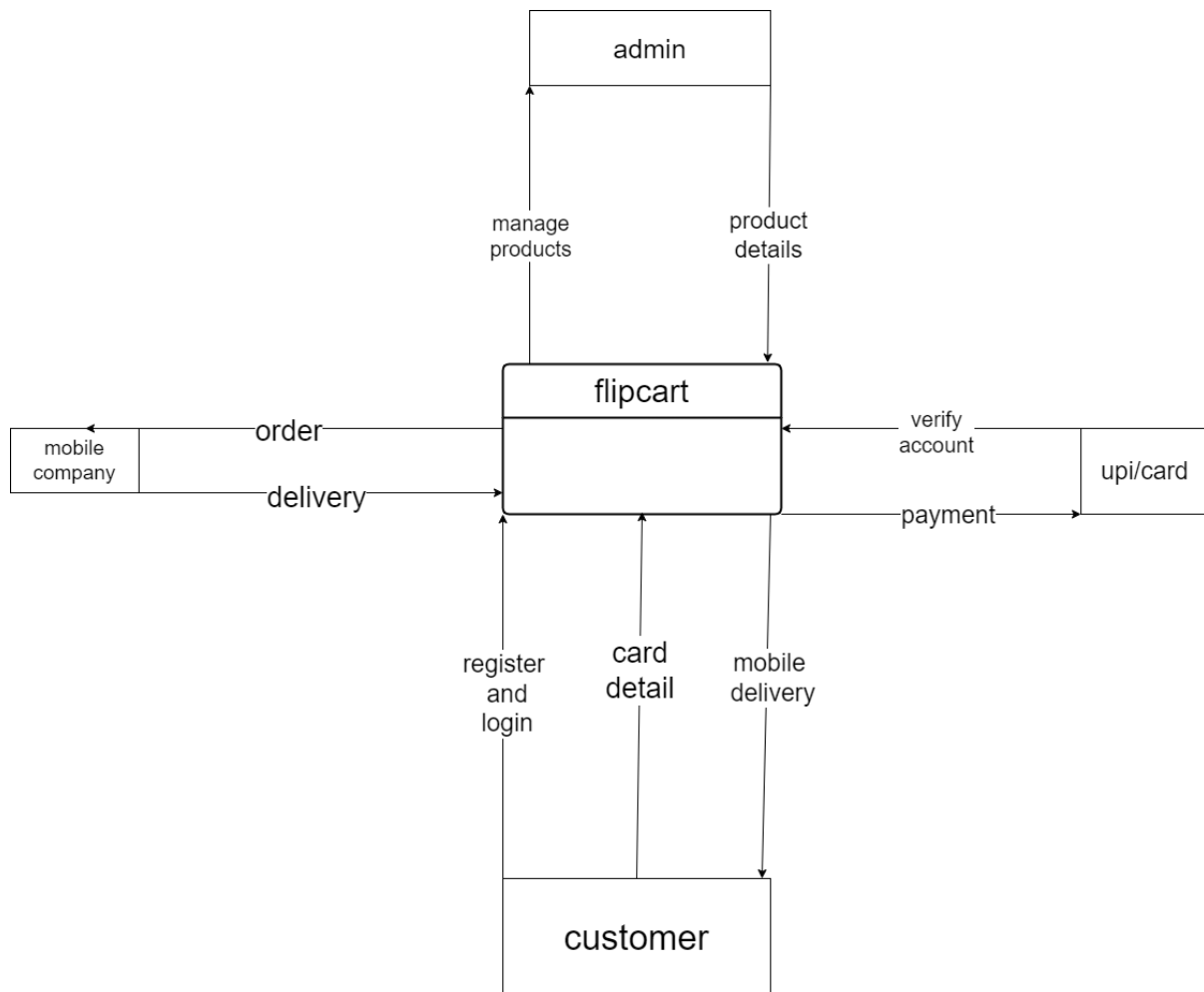


**\*It provides an overview of**

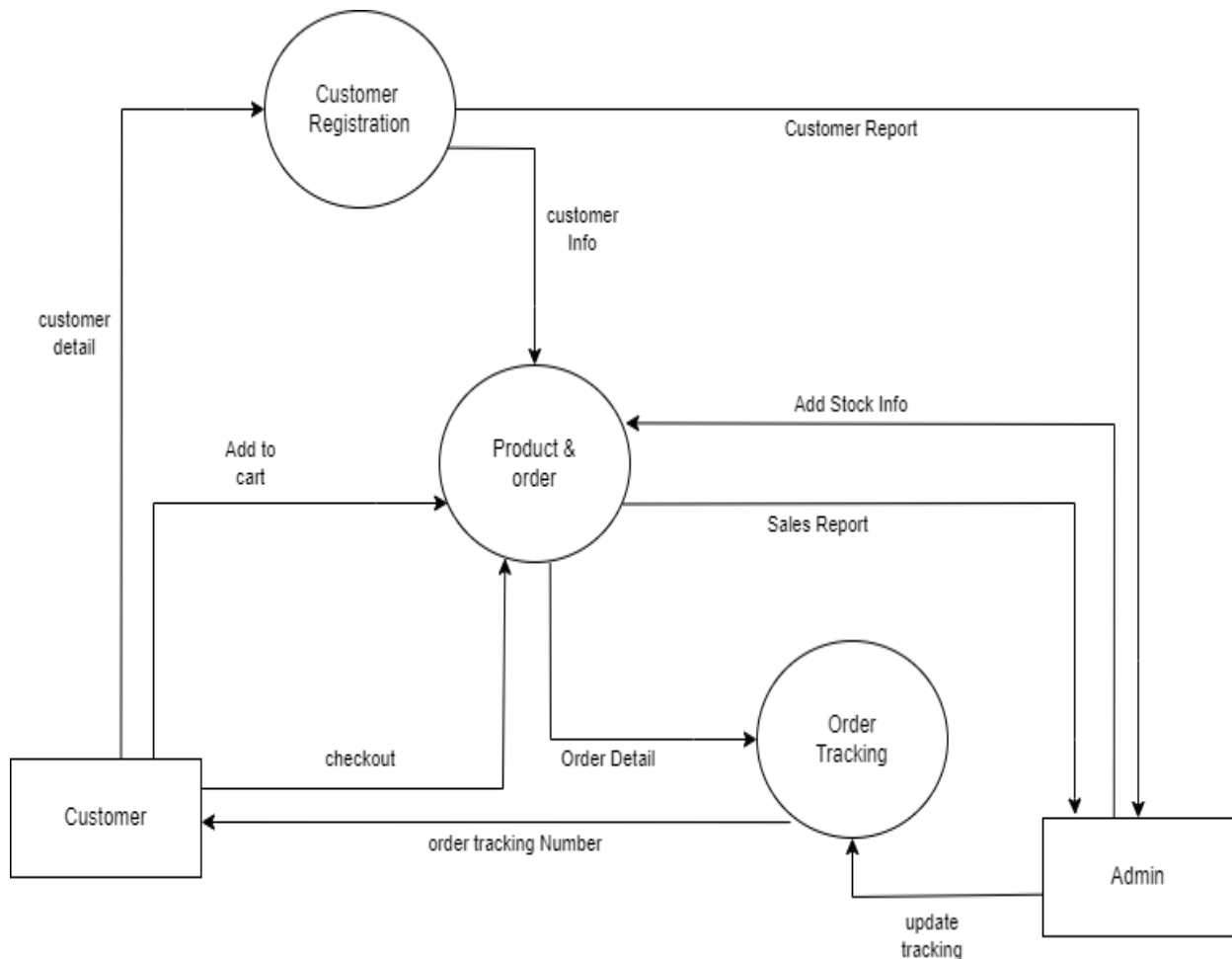
- What data is system processes.
- What transformation are performed.
- What data are stored.
- what result are produced.

**\*The Data Flow Diagram has 4 components.**

- 1)process
- 2)Data Flow
- 3)Data Store
- 4)External Entity



**Fig: Zero level DFD diagram**



**Fig: First level DFD diagram**

5)what is Flow chart? Create a Flow chart to make Addition of two numbers.

**Answer:**

- A Flowchart is a type of diagram that Represents a process.
- It is step by step process for solving task.
- It uses symbol, shape and Arrows to show process.
- It Arrange the Activity in proper way.

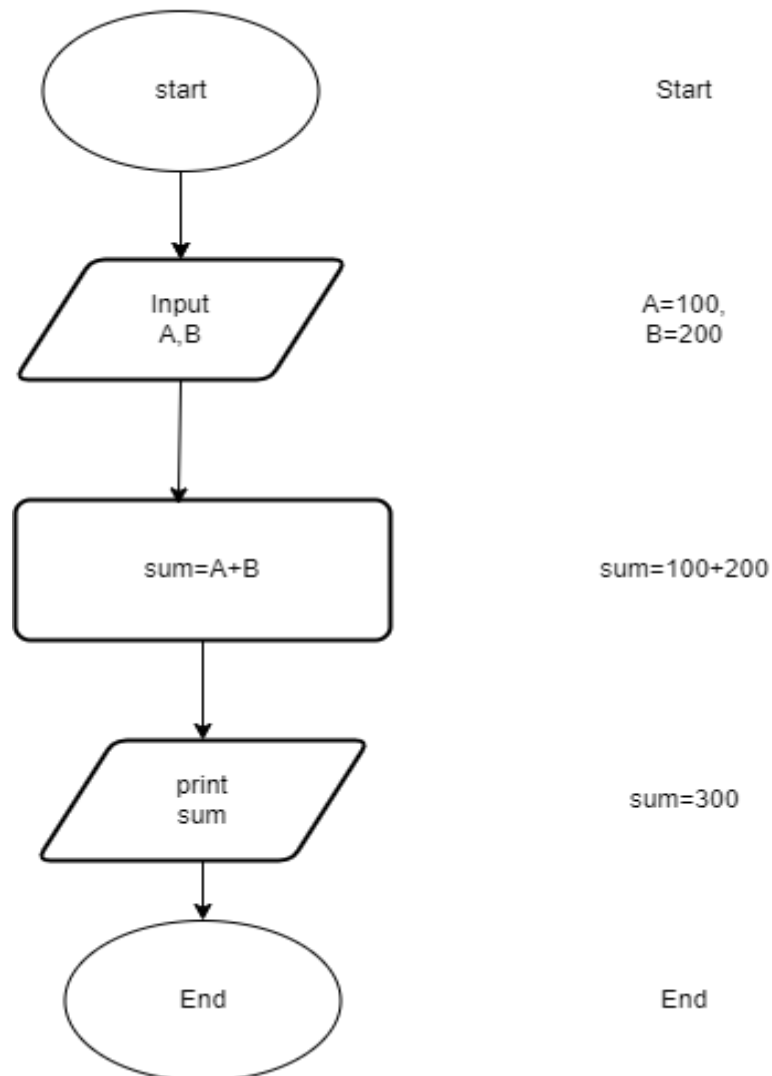


Fig: Flowchart of Addition

6) What is Use case Diagram? Create a use-case on bill payment on Paytm.**Answer:-**A use case diagram is Represents how user interact with a system.

-It is type of UML (User Modeling Language) diagram.

\*Component of use case

-Actor

-Use Case

-Associations

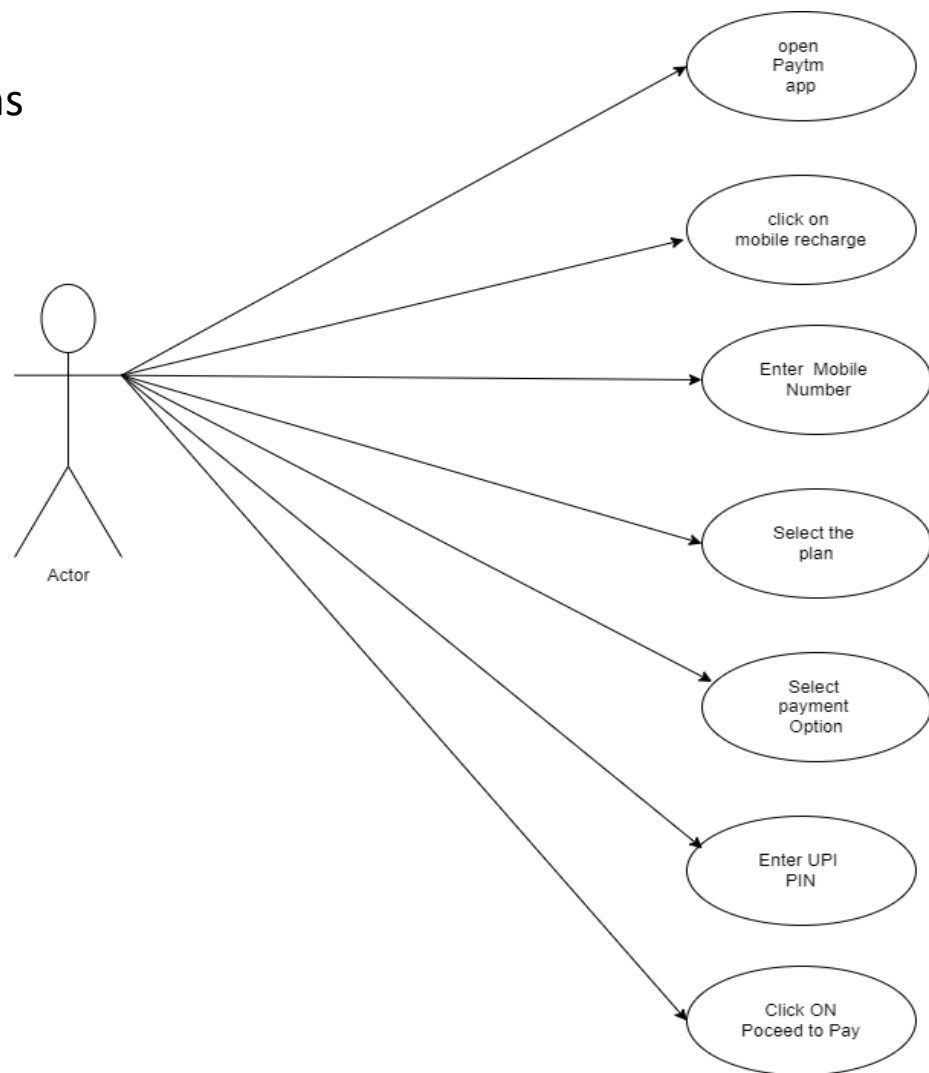


Fig: use-case Diagram on Mobile Recharge