1. What is Software ? What is Software engineering ?

→ **Software** : Software is a collection of computer programs.

Software Engineering :-
→ **Software** : Software is a Program or set of Programs containing instructions which provide desired functionality.
→ **Engineering** : Engineering is a Process of designing and building something that ensure particular purpose.
→ **Software Engineering** is a systematic approach to the design, development, operation, and maintenance of a software system.

2. Explain types of software ?
→ (1) System software / operating system,
→ (2) Application s/w ,
→ (3) Programming language.

→ (1) **System s/w or OS** :- System software / operating system provides the basic functions for computer usage and helps to run the computer hardware and system. - System software / operating system is the s/w used by the computer to translate inputs from various sources into a language which a machine can understand. Basically OS coordinates the different hardware components of a computer.

→ (2) **Application s/w** :- Application s/w is the general designation of computer programs for performing user tasks.

- **Types of application s/w.**
→ 1. **Mobile app** :- Application that run on mobile
   - Ex. Instagram, facebook, etc
→ 2. **Desktop app** :- That run stand-alone in a desktop or laptop computer. - Ex. Microsoft office suite which includes Word, Excel and PowerPoint.
   - Ex. Outlook for email, and firefox, Google Chrome, Mozilla are the web   browser.
→ 3. **Web app** :- That run on a web browser
→ ex. google.com, facebook.com, etc.
→ (3) **Programming s/w** :- Programming s/w is the process of designing, writing, testing, debugging, and maintaining the source code of computer programs.
→ This s/w is pawritten in a programming language.
→ The purpose of programming is to create a program that exhibits a certaindesired behavior.

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

Ans:-Software Devlopment Life Cycle :-

1.Requirement Gathering

2. Requirement Analysis

3.Design

4.Implementation

5.Testing

6.Maintenance

1.Requirement Gathering:-Although requirement may be document in written form they may be incomplete unabigous or even incorrect.

2 .Requirement Analysis:-The analysis phase defines the requrment of the system,independent of how these Requirement will be accomplished.The architecher defines the components their interfaces and behaviors.

3.Design:-Design Architecture Doccument,Performance Analysis,Test Plan etc. 4.Implementation:-In the implementation phase,the team builds the componets either from scratch or by composition. Given the architecher document from the design phase and the requrment document from the analysis.
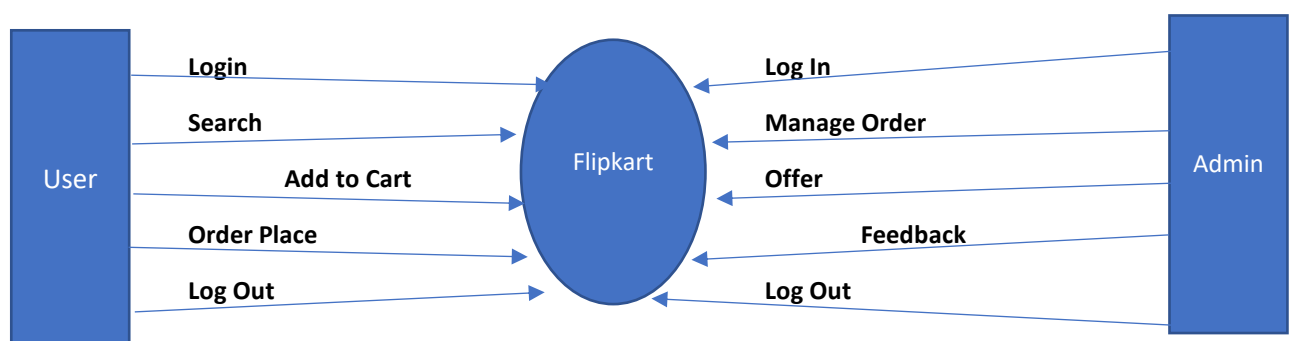
5.Testing:-There is merit in this approach.it is hard to see own mistake,and a fresh eye can discover obvious errors much faster than the person who has and re-read the material many time.

6. Maintenance:-Software Maintenance is one of the activities in software engineering,and is the process of enchancing and optimizing devloyed software,as well as fixing defects.
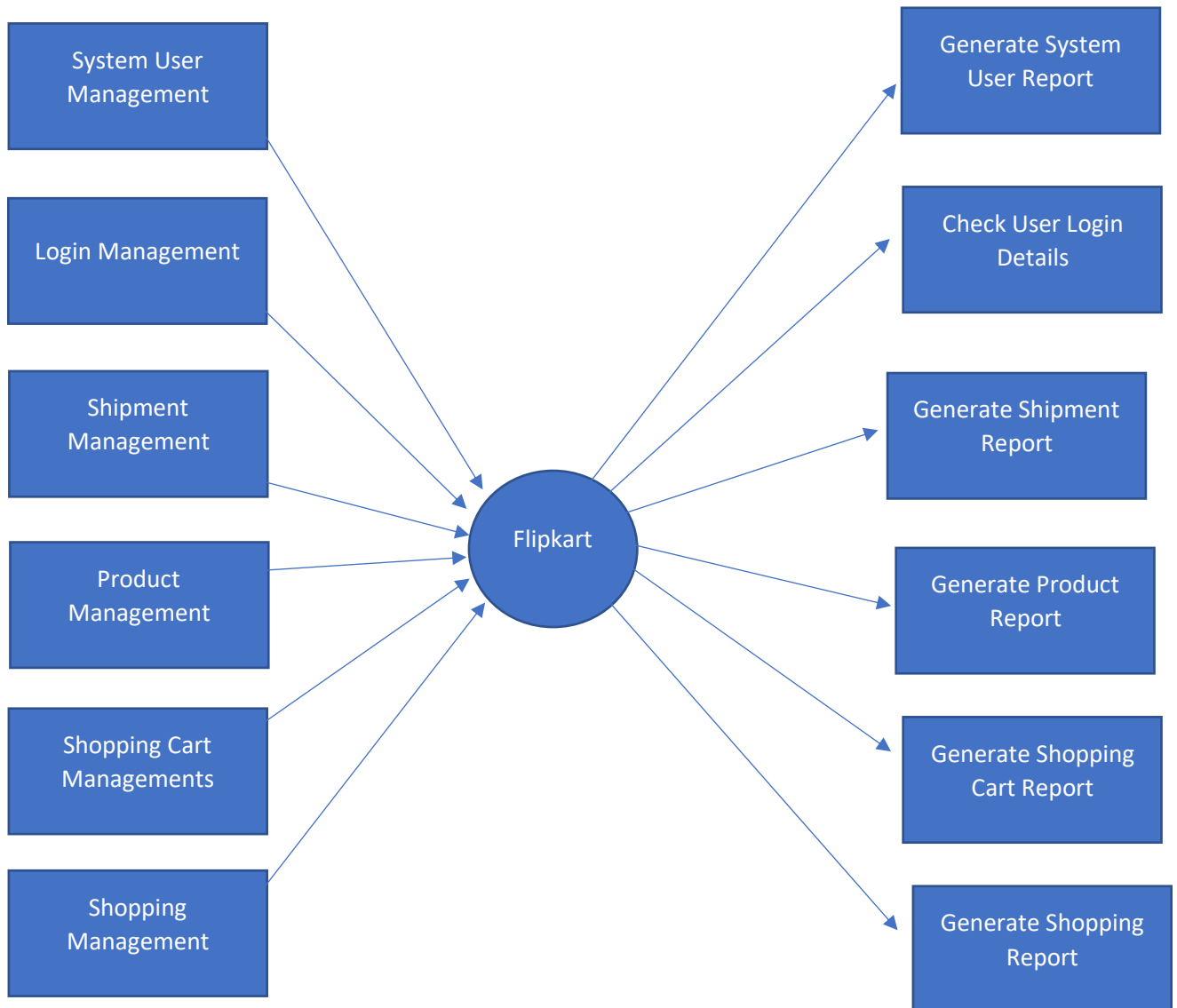
(4) What is DFD? Create a DFD diagram on Flipkart ?

→ A Data Flow Diagram (DFD) is a traditional way to visualize the information flows within a system.

DFD LEVEL : 0

DFD LEVEL : 1

DFD LEVEL : 2

Admin

Login to System

Check Roles of Access

Manage Product Detailss

Manage Shopping Cart Details

Manage Customer Details

Manage Shipment Details

Forgot Password

Check Credentials

Manage Modules

Manage Payment Details

Manage Order Details

Manage Report

Send Email to User

Manage System Admins

Manage User Permission

Manage Roles of User
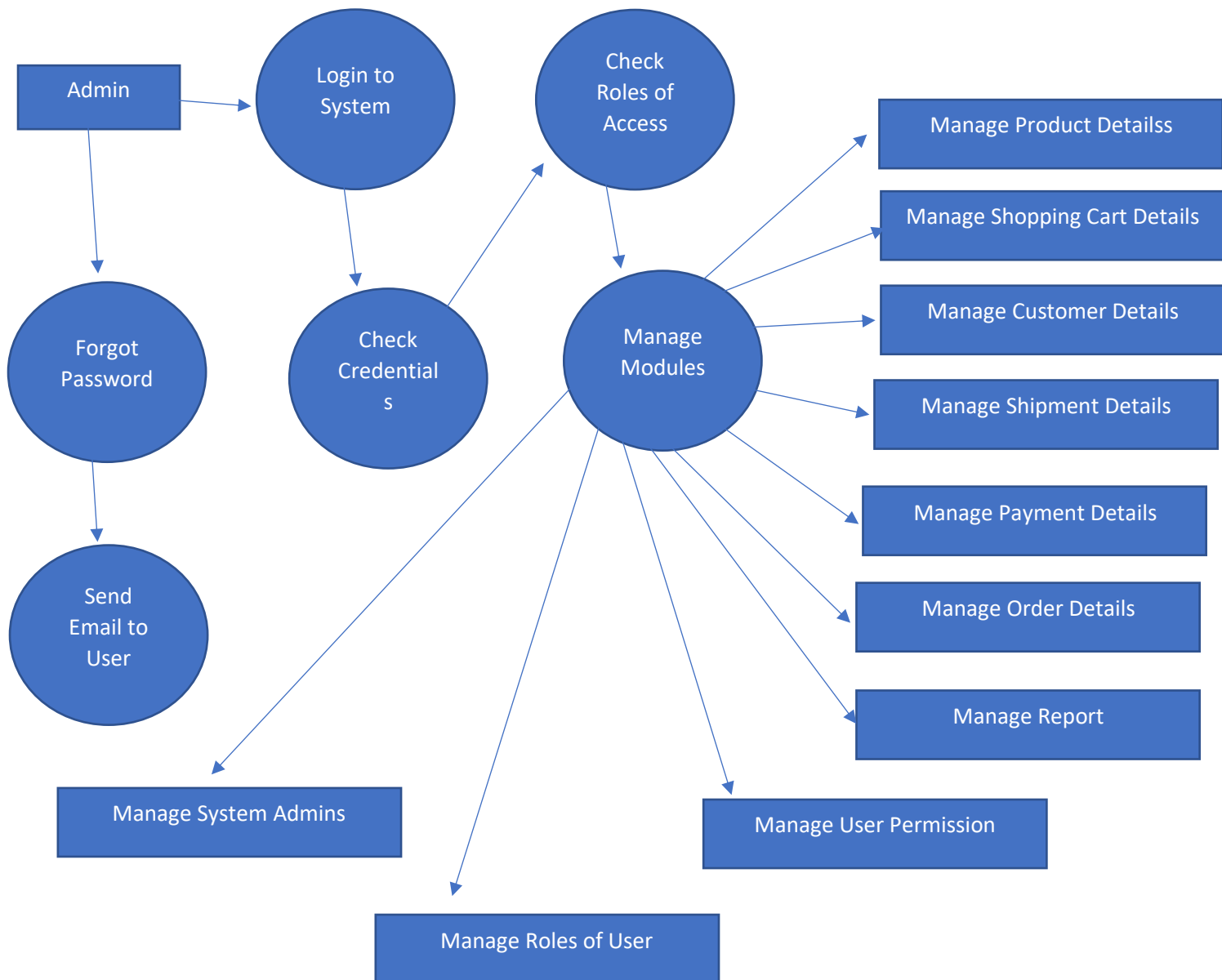
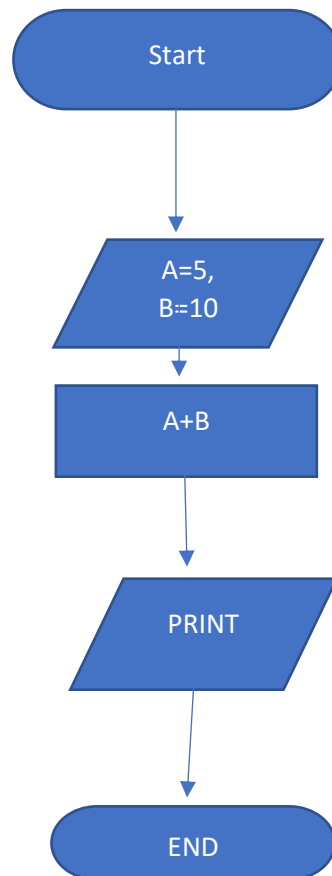**(5) What is Flow chart? Create a flowchart to make addition of two numbers**

→ A flow chart is a graphical or symbolic representation of a process.

```
         ┌─────────────┐
         │    Start    │
         └─────────────┘
                │
                ▼
           ╱─────────╱
          ╱  A=5,   ╱
         ╱  B=10   ╱
        ╱─────────╱
              │
              ▼
        ┌───────────┐
        │    A+B    │
        └───────────┘
              │
              ▼
          ╱─────────╱
         ╱  PRINT  ╱
        ╱─────────╱
              │
              ▼
       ┌─────────────┐
       │     END     │
       └─────────────┘
```

(6) What is Use case Diagram? Create a use-case on bill payment on paytm ?

→ A Use Case diagram is a graphical depiction of a user possible interaction with a system

	LOG IN	
	OPTION	
	SER/BILL NUMBER	
User	PAYMENT	Admin
	SUCCESS / FAIL	
	FEEDBACK	
	LOG OUT	