1. What is Software? What is Software Engineering?

Ans. Software: It is language for computer

- It is a collection of set of programs or the related data which provides insturctions for the computer what to do and how to do it just like and human langauge
  Software Engineering:
- Software is a program or a set of program containing instructions for a desired functiona;ity
- Engineering is the process of desiging and building something which ensures particular purpose.
- **Software engieering** is a process of design, development, operation and a maintainence of a software system.

2. Types of Software

Ans. There is main three types of software

- **System software**
  The software which is inbuilt in the system (PC) are called as System software.
  E.g. OS- Operating System like windows,IOS,
    System Drivers like wifi drivers and Bluetooth drivers.
- **Application Software**
  The software which are used to do different kind of functions to use in the system.
  E.g. Microsoft Suite, games and Antivirus softwares
- **Utility Software Or Programming Software**
  2 kinds of **Utility Software**:
      - CAM – Computer aided Manufacturing (Apply designs)
      - CAD – Computer aided designing (E.g. 3d models)
  Programming Software
      It is a process of designing, writing, debugging and maintaining the source code of the computer program E.g. Java, c ,c ++

3. What is SDLC? Explain the phases of SDLC

Ans. SDLC is Software Development Life Cycle: it is a series of steps or phases that provide a model for the development and lifecycle management of an application or a software app.
SDLC Phases:

- **Analysis:** To analyse the problem in the market for which one can solve the problem and this step is also a **WHAT** step.
- **Planning:** To Plan how the solution would work and the which can be defined as **HOW** step. Which stacks to be used and which archjitectures and machines are to be used and how to use them is done in the planning phase.
- **Designing:** To design the architecture of the software which is the flow of the software more precisely. The whole structure is to be planned within this step that what would be the flow and also analysis of the plan and performance.
- **Development:** The Design step helps the development stage to develop the code accordingly to develop a software. Whatever development language is decided to be used for the development is to be used and the development is done according to the requirements. It is build from scratch. Basically this tage is also known as implementation stage where the plans and designs are implemented in a form of code.
- **Deployment/Testing:** Testing is done in a particular environment if the code is working properly without any errors. Deployment is to take the code in the testing environment.
- **Maintanence:** After the code is made and the software is built it has to be maintained. The crowd which visit the website or software is to be managed and the code is working properly and it has to be updated accordingly. Maintainence is aimportant part for the software Development.

4.   What is DFD? Create a DFD diagram on flipkart.

Ans. A DFD is a DATA FLOW DIAGRAM. It is a diagram which is the traditional way to visualize the information flow within a system.
A neat and clean DFD can depict a good amount of the system requirements graphically. It can be manual, automatic or can be both.
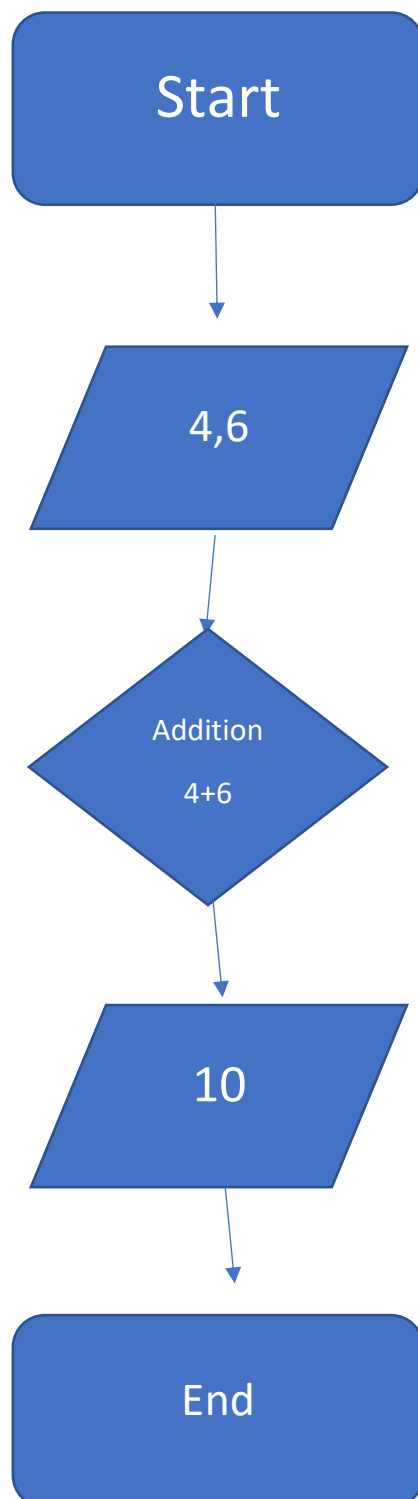
DFD for Flipkart
                      If new user
User Login - - - - - - - - - - - - - - Sign up
- - - - - - - - -
- - - - - - - - -
Item Category search
- - - - - - - - -
Item selection
- - - - - - - - -
Address on Checkout page for all details
- - - - - - - - -
- - - - - - - - -
Payment Page
- - - - - - - - -
Payment Done
- - - - - - - - -
- - - - - - - - -

5. What is Flow Chart? Create a flow chart of flipkart

Ans. A flow chart is a graphical or symbolic representation of a process. Each step in the process is represented by a different symbol and conatains a short description of the process step. The flow chart symbols are linked together with the arrows showing the process flow direction.

Flow chart

```
┌─────────────┐
│    Start    │
└─────────────┘
       │
       ▼
   ╱─────────╲
  │    4,6    │
   ╲─────────╱
       │
       ▼
     ◇ Addition ◇
       4+6
       │
       ▼
   ╱─────────╲
  │    10     │
   ╲─────────╱
       │
       ▼
┌─────────────┐
│     End     │
└─────────────┘
```

6.   What is Use case Diagram? Create a Use case diagram for Bill payment on pay-tm.

Ans. Use case Diagram is a graphical flow of a system for a particular use case. Every use case has a different diagram for the process as the flow for all the use cases are different.

Use case Diagram for Bill Payment on Pay-tm

```
                 If New user
User Login - - - - - - - - - - - - - - - - - - - Registration
- - - - - - - -
- - - - - - - -
Open Bills section
- - - - - - - -
Input Customer details
- - - - - - - -
View Bill Details
- - - - - - - -
Selection of Payment Modes
- - - - - - - -
- - - - - - - -
Payment method input
- - - - - - - -
- - - - - - - -
Payment Done
```