Assignment

Module-1 (SDLC)

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Q-1) What is Software? What is software engineering?

Ans. Software is nothing but set of instructions or set of programs are known as Software.

>> Software is that part of a computer, which cannot be touched. Software tell a computer what to do and how to do it.

- ⇨ Software Engineering
- ⇨ Software engineering is a branch of engineering that deals with the development of software. Software generally refers to the programs used by computers; technically, it is the collection of codes, documents and triggers that do a specific job and fulfill a specific set of requirements. The development of software employs the best practices, principles and methods of engineering and computer programming.
- ⇨ If you are curious about what is software engineering, put simply, software engineering is the application of engineering practices and principles to the field of software development.
- ⇨ Software engineering has two parts: software and engineering.

  Software is a collection of codes, documents, and triggers that does a specific job and fills a specific requirement.

  Engineering is the development of products using best practices, principles, and methods.

Q-2) Explain types of software?

Ans. Mainly three types of Software

1) System Software
2) Application Software
3) Driver Software
4) Middleware
5) Programming Software

1- System Software:

System software is a software designed to provide a platform to other software. System Software control and manage the operations of computer hardware.

Ex.- Operating system(window, linux, …)

2- Application Software:

The software that helps you to do a specific type of works is called application software.

Ex.- MS Word,Excel,…

3- Driver software:

This software is often considered a type of system software. Device drivers control the devices and peripherals connected to a computer, enabling to perform their specific tasks.

4- Middleware:

The term middleware describes software that mediates between application and system software or between two different kind of application software.

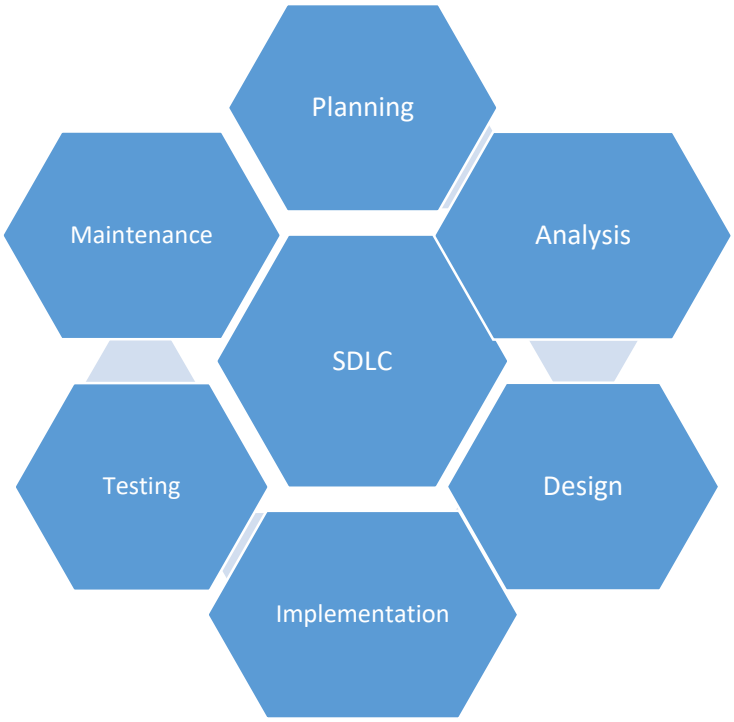
5- Programming Software:

Computer programmers use programming software to write code. Programming software and programming tools enable developers to develop, write, test and other software programs.

Q-3) what is SDLC? Explain each phase of SDLC?

The Software Development Life Cycle (SDLC)refers to a methodology with clearly defined processes for creating high-quality software.

SDLC is process of use to design, develop and test high quality software.



● Planning

The planning stage where you are gathering requirement from client or stakeholder and the requirement analysis stage where you are looking into the feasibility of creating the product, revenue, the cost of production, the needs of the user etc..

1) Functionality requirement

2) User interface

3) Technical architecture

4) Project Plan

5) Technology platform selection

● Analysis :

The analysis stage includes gathering all the specific details required for a new system as well as determining the first idea for prototypes.

1) Goal

2) Requirement

3) Determination

4) Feasibility

● Design :

The design phase is where you put pen to paper so to speak. The original plan and vision is elaborated into the basic structure of the software, system design, programming language, template, platform to use, and application security measures.

1) Detailed specification

2) Finalise user interface

3) Application architecture

4) System interface design

5) Test plan

● Implementation :

The implementation of design begins concerning writing code. Developers have to follow the coding guidelines described by their management and programming tools like compilers, interpreters, debuggers, etc. are used to develop and implement the code.

1) Application code Development

2) Interface Development

3) All coding stuff

4) Integration with existing apps.

● Testing Integration :

Before getting the software product out the door, it is important to have your quality assurance team test it to make sure it is functioning properly and does what it is meant to do. The testing process can also help hash out any major user experience issues and security issues.

1) Unit and integration testing

2) System Testing

3) User acceptance Testing

4) Installation and staging environment

● Maintenance :

If you are following the waterfall structure of the software development process. However, the industry is moving towards a more agile software development approach where maintenance is only a stage for further improvement.

1) Installation on production

2) Production Testing

3) Transition on Operation

4) Post development support

5) Bug checks

6) Ongoing maintenance

Q-4) What is Flow chart? Create a flow chart to make addition of two numbers.

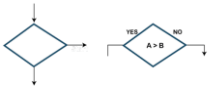
The Flowchart is the most widely used graphical representation of an algorithm and procedural design workflows. It uses various symbols to show the operations and decisions to be followed in a program. It flows in sequential order.

** Flow chart Elements

1)  Start/ Stop

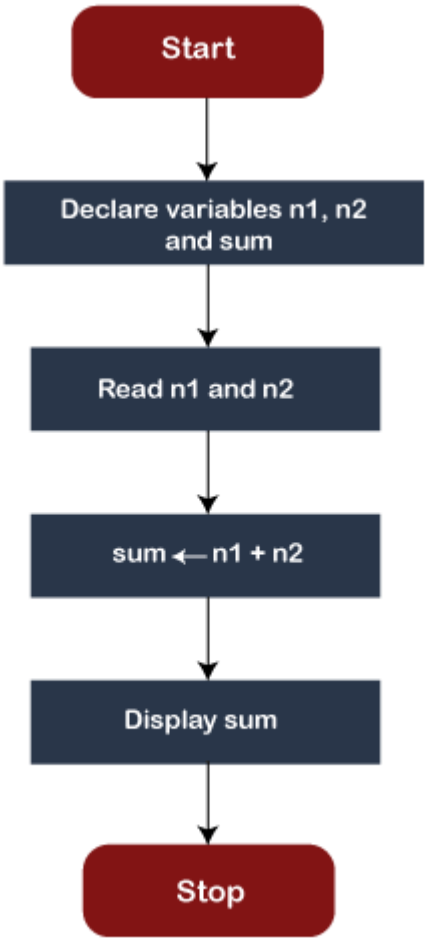
2)  Process

3)  Inputs/Outputs

4) 

Decision

5)  Arrow



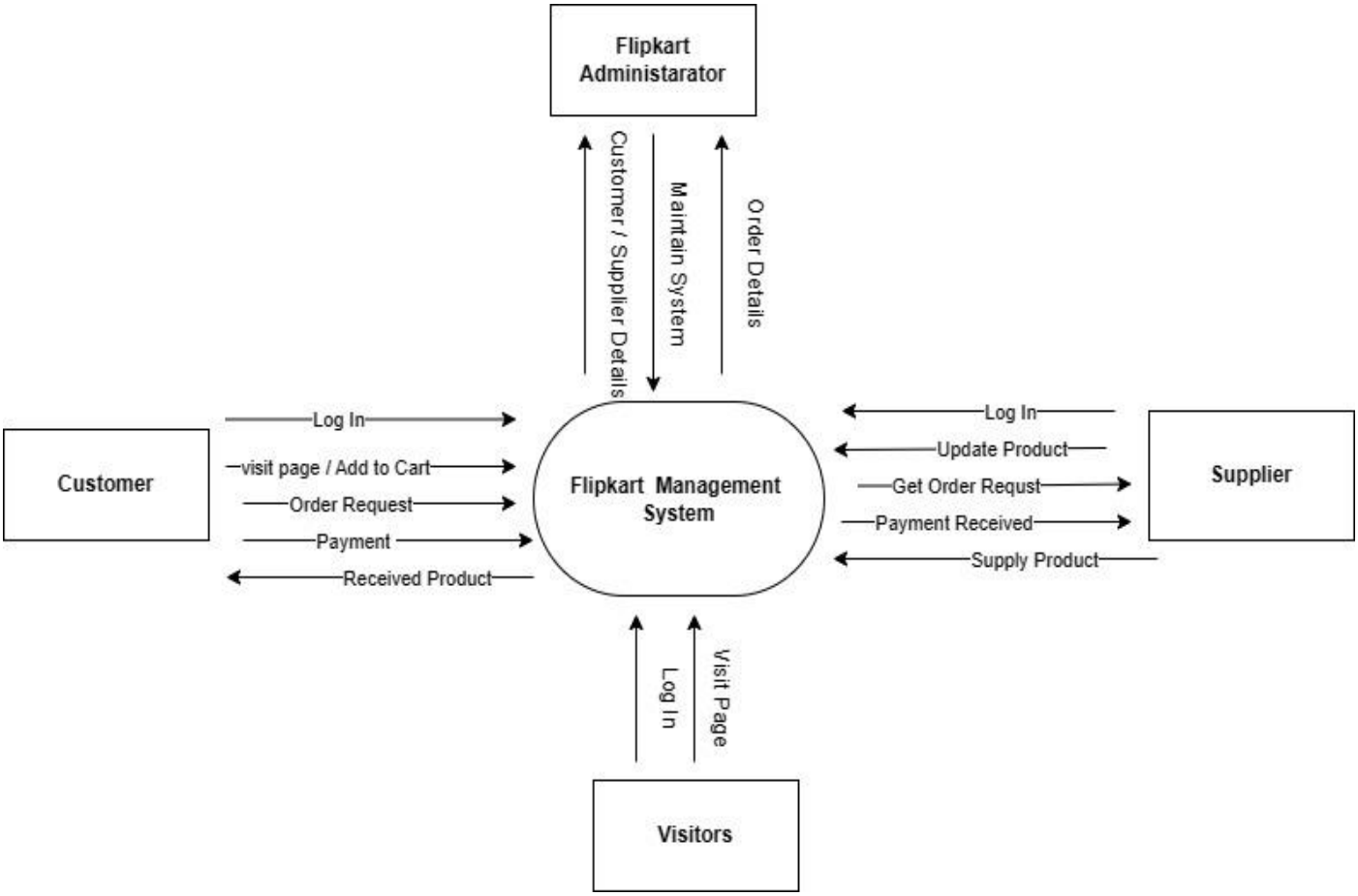
Q-5) What is DFD? Create a DFD diagram on Flipkart.

Ans : -

DFD stand of “Data Flow Diagram”. It is also known as a “Bubble Chart”.

A data-flow diagram is a way of representing a flow of data through a process or a system (usually an information system). The DFD also provides information about the outputs and inputs of each entity and the process itself. A data-flow diagram has no control flow — there are no decision rules and no loops. Specific operations based on the data can be represented by a flowchart.

Data Flow Diagram on Flipkart



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

Ans: -

A use case diagram is a graphical depiction of a user's possible interactions with a system. A use case diagram shows various use cases and different types of users the system has and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses. The actors are often shown as stick figures

Purpose of Use Case Diagrams

The main purpose of a use case diagram is to portray the dynamic aspect of a system. It accumulates the system's requirement, which includes both internal as well as external influences. It invokes persons, use cases, and several things that invoke the actors and elements accountable for the implementation of use case diagrams. It represents how an entity from the external environment can interact with a part of the system.

Following are the purposes of a use case diagram given below:

1. It gathers the system's needs.
2. It depicts the external view of the system.
3. It recognizes the internal as well as external factors that influence the system.
4. It represents the interaction between the actors.

- **use-case on bill payment on paytm**