Assignment

Module-1

Name: Vipul Memakiya

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.

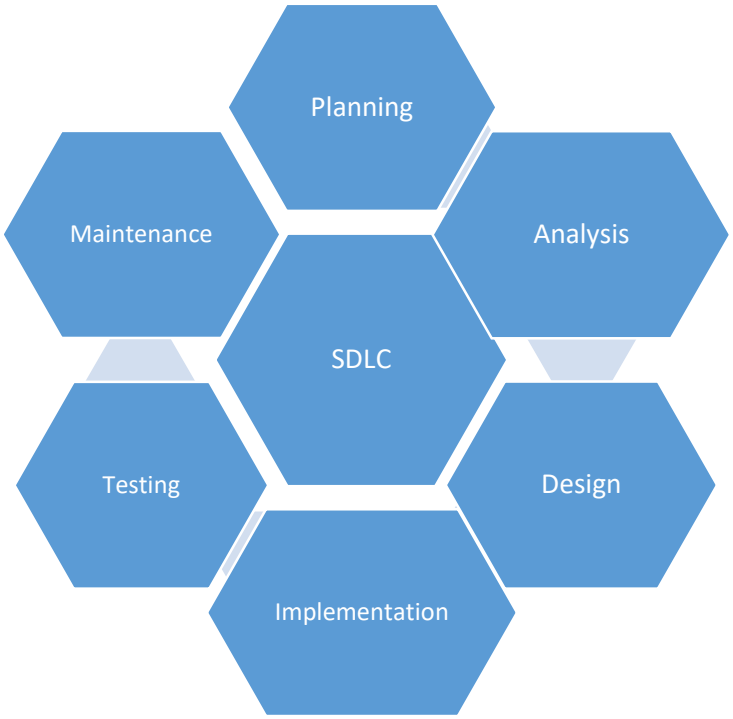
5- Programming Software:

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.

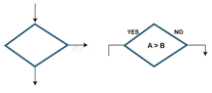
The Flowchart is the most widely used graphical representation of an algorithm and procedural design workflows. It uses various symbols to show the operations and decisions to be followed in a program. It flows in sequential order.

** Flow chart Elements

1)  Start/ Stop

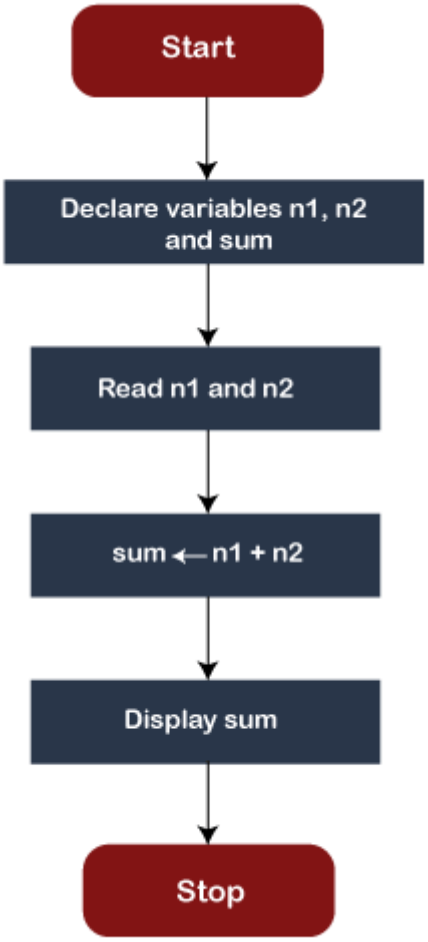
2)  Process

3)  Inputs/Outputs

4) 

Decision

5)  Arrow


Start
Declare variables n1, n2 and sum
Read n1 and n2
sum ← n1 + n2
Display sum
Stop