Software engineering assignment

Q1-what is software? what is software engineering ?

A.Software is a set of instructions or programs that tells a computer what to do.

It can be used to perform a wide variety of tasks, form basic calculations to

to running complex systems.

Software engineering is the process of designing, developing, testing and maintaining software. It is an engineering discipline that uses a systematic and scientific approach to the design, development, testing, and maintenance of software. It also involves the management of the entire software development process, including requirements gathering, design, implementation, testing, and maintenance. The goal of software engineering is to produce high-quality, reliable, and maintainable software that meets the needs of its users.

Q2-Explain types of software

A2-There are several types of software, and they can be broadly classified into the following categories:

1. System software: This type of software controls the basic functions of a computer and provides a platform for other software to run on. Examples include operating systems (such as Windows, MacOS, and Linux), device drivers, and firmware.
2. Application software: This type of software is designed to perform specific tasks and is used by end-users. Examples include productivity software (such as Microsoft Office, Google Docs), games, multimedia software (such as Adobe Photoshop, Premiere Pro), and educational software.

Q3-what is SDLC? Explain each phase of SDLC

A3- SDLC stands for Software Development Life Cycle. It is a process that defines the stages involved in creating and maintaining software. The SDLC process includes several phases, each with its own set of activities and deliverables. The phases of SDLC are as follows:

Requirements gathering and analysis: This phase involves gathering and documenting the requirements for the software, including what it should do, who will use it, and what the environment will be like.

Design: This phase involves creating a detailed plan for how the software will be built. This includes creating architectural diagrams, data models, and user interfaces.

Implementation or Development: This phase is where the code is written, and the software is built. This phase includes the coding, debugging, testing, and documentation of the software.

Testing: This phase involves testing the software to ensure that it meets the requirements and that it is free of defects. This includes both functional and non-functional testing.

Deployment: This phase involves installing and configuring the software in its production environment. This includes creating installation packages, setting up the infrastructure, and testing the software in the production environment.

Maintenance: This phase includes maintaining the software after it has been deployed. This includes making updates and bug fixes, and ensuring that the software continues to meet the needs of its users.

It is worth noting that there are several variations of SDLC model with different number of phases and each organization may have its own version of SDLC model.

Q4-What is DFD? Create a DFD diagram on Flipkart

A-4-DFD stands for Data Flow Diagram. It is a graphical representation of the flow of data through a system. DFDs are used in software development to model the flow of information through an information system, and to depict how different parts of the system interact with each other.