* ***S.E. Assignment***
* **What is software ? What is software engineering ?**

Ans. Software refers to a set of instructions or programs that tell a computer or other electronic device what to do. This includes everything from operating systems and productivity software, to video games and mobile apps. Software can be divided into two main categories: system software, which controls the computer itself, and application software, which is designed to help users perform specific tasks.

Software engineering, on the other hand, is the process of designing, developing, testing, and maintaining software. It involves applying engineering principles to the creation of software in order to ensure that it is reliable, efficient, and meets the needs of its users. This includes things like developing requirements, creating designs, writing code, testing software, and deploying it to users. Software engineering is a complex and interdisciplinary field that requires a strong foundation in computer science, as well as knowledge of project management, quality assurance, and user experience design.

* **Explain types of software.**

Ans. There are several types of software, including:

* System software: This is the software that manages and controls the hardware resources of a computer system. It includes operating systems, device drivers, firmware, and utility programs.
* Application software: This is software that is designed to perform specific tasks or applications for users. Examples include word processors, spreadsheets, graphic design software, video editors, and web browsers.
* Programming software: This is software that is used to create other software. It includes programming languages, integrated development environments (IDEs), and software development kits (SDKs).
* Database software: This is software that is used to manage and organize large amounts of data. Examples include database management systems (DBMSs) and data warehousing software.
* Security software: This is software that is designed to protect computer systems and networks from unauthorized access, viruses, and other security threats. Examples include antivirus software, firewalls, and intrusion detection systems.
* Educational software: This is software that is designed to teach or assist in the learning process. Examples include educational games, language learning software, and simulation software.
* Entertainment software: This is software that is designed for entertainment purposes. Examples include video games, music players, and movie players.

Communication software: This is software that is used to facilitate communication between users, such as email clients, instant messaging software, and video conferencing software.

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

Ans. SDLC stands for Software Development Life Cycle, which is a systematic process used to develop software. The SDLC process includes a series of well-defined phases that are used to plan, design, build, test, and deploy software.

Here are the five main phases of the SDLC:

* Planning: In this phase, the objectives, requirements, and feasibility of the software project are determined. Project goals are identified, and project requirements are gathered. A feasibility study is also conducted to determine if the project is feasible in terms of cost, time, and resources.
* Analysis: During this phase, the software requirements are analyzed in detail. The business needs, goals, and objectives of the project are identified. The technical specifications and functional requirements of the software are also determined.
* Design: In this phase, the software architecture is designed, and the software components are identified. The design phase involves creating a detailed plan for the software that includes the user interface, the database schema, the software components, and the deployment plan.
* Development: The development phase is where the software is actually built. Developers write the code according to the software design specifications. This phase also includes unit testing to ensure that individual components are working correctly.
* Testing: In this phase, the software is tested to ensure that it meets the requirements specified in the analysis phase. Testing involves various types of testing such as unit testing, integration testing, system testing, and acceptance testing.
* Deployment: After successful testing, the software is deployed to the production environment where it is made available to the end-users. This phase involves installation, configuration, and maintenance of the software in the production environment.

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* **what is DFD ? Creat a DFD diagram on Flipkart**

DFD stands for Data Flow Diagram, which is a graphical representation of a system that shows how data flows through different processes.

Here's a simple DFD diagram for the Flipkart website:

Order Placed

Flipkart

User

Oeder Confirmation

Payment Information

Payment Confirmation

Product Details

Shipping details

In this diagram, the user interacts with the Flipkart website to place an order. The order information is then transmitted to Flipkart, which confirms the order and requests payment information from the user. Once payment information is received, Flipkart confirms payment and provides the user with product and shipping details. The user can then track their order through the website.

* **What is Flow chart ? Creat a flowchart to make addition of two numbers.**

A flowchart is a type of [diagram](https://en.wikipedia.org/wiki/Diagram) that represents a [workflow](https://en.wikipedia.org/wiki/Workflow) or [process](https://en.wikipedia.org/wiki/Process). A flowchart can also be defined as a diagrammatic representation of an [algorithm](https://en.wikipedia.org/wiki/Algorithm), a step-by-step approach to solving a task.

The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows. This diagrammatic representation illustrates a solution model to a given [problem](https://en.wikipedia.org/wiki/Problem_solving). Flowcharts are used in analyzing, designing, documenting or managing a process or program in various fields.

* A process step, usually called an activity, is denoted as a rectangular box.
* A decision is usually denoted as a diamond.

Top of Form

Print Sum

Sum = Number 1 + Number 2

Input Number 1,

Number 2

* **What is Use case Diagram ? Creat a use case on bill payment on Paytm.**

A use case diagram is used to represent the dynamic behavior of a system. It encapsulates the systm's functionality by incorporating use cases, actors, and their relationships. It models the tasks, services, and functions required by a system/subsystem of an application. It depicts the high-level functionality of a system and also tells how the user handles a system.

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.

Diagram

Manage users & Full application

Agents

Super Admin

Manage Payment

Check Bills

Send invoice to custemer

Manage Payment Mode

Check Payment

Customers

System

User

Make Payments

Manage Receipt

Manage Account

Search Bills

Manage Bills

View Bills

Change account password

Update my profile

Login and logout from syste