

Software Engineering Assignment

Module:1(SDLC)

1. What is software? What is software engineering?

Ans:- A set of instruction given to the computer to solve a problem is called **software**.

Software engineering is a detailed study of engineering to the design, development and maintenance of software.

2. Explain types of software.

Ans:- Two types of software:-

- a) **System software**
- b) **Application software**

a) **System software:-** A set of program to control and manage the operations of a computer hardware.

- ✓ Manage resources
- ✓ Helps application software to run
- ✓ Saving data on disk
- ✓ Makes computer usable
- ✓ Printing document

➤ Types:-

- i. **Operating system:-** Software that controls the operation of a computer and directs the processing of programs(by assigning storage space in memory and controlling input and output functions).
- ✓ Requirement of each computer
- ✓ Other software run through it

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Examples:-

- ◆ Windows
- ◆ MAC OS
- ◆ Linux
- ◆ Unix
- ◆ Ubuntu

ii. Utility program:- A program that performs a specific task related to the management of computer functions, resources, or files.

- ✓ Improve the performance
- ✓ Protect the computer
- ✓ Optimize resources

Examples:-

- ◆ Disk Tools
- ◆ Antivirus
- ◆ Compression tools
- ◆ Backup Software

iii. Device Drivers:- A device driver is a computer program that operates or controls a particular type of device that is attached to a computer.

b) Application Software:- Application software is used to perform various tasks on the computers.

- ✓ So many application software
- ✓ Use according to need
- ✓ Also known as application package

➤ **Types:-**

i. Customized Software:- A type of application software that is designed for a particular business or organization.

- ✓ Exact requirements
- ✓ Developed by a team or individual
- ✓ Very Costly

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ii. Package Software:- A type of application software that is developed for the scale to the general public.

- ✓ Off the shelf software
- ✓ Developed by expert programmers
- ✓ Loaded with features

Examples:-

- ◆ MS Word
- ◆ MS Excel
- ◆ Adobe photo shop

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

Ans:- SDLC stands for software development life cycle, SDLC is a Process used by the software industry to design, develop and test high quality soft wares.

➤ **Phases of SDLC:-**

- i. Gathering Requirements & Analysis
- ii. Design
- iii. Coding or Development
- iv. Testing
- v. Deployment
- vi. Maintenance

i. Gathering Requirements & Analysis:- This phase involves gathering information about the software requirement from stakeholder, such as customers, end-users, and business analysts.

ii. Design:- In this phase, the software design is created, which includes the overall architecture of the software, data structures, and interfaces.

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It has two steps:-

- ◆ **High-level design(HLD):-** It gives the architecture of software products.
- ◆ **Low-level design(LLD):-** It describes how each and every feature in the product should work and every component.

iii. Coding or Development:- The design is then implemented in code, usually in several iterations, and this phase is also called as Development.

Things you need to know about this phase:

- ◆ This is the longest phase in SDLC model.
- ◆ This phase consist of Front end+Middleware+Back-end.
- ◆ **In Front-end:** Development of coding is done even SEO setting are done.
- ◆ **In Middleware:** They connect both the front end back end.
- ◆ **In the back-end:** A database is created.

iv. Testing:- The software is thoroughly tested to ensure that it meets the requirements and works correctly.

v. Deployment:- After successful testing, The software is deployed to a production environment and made available to end-users.

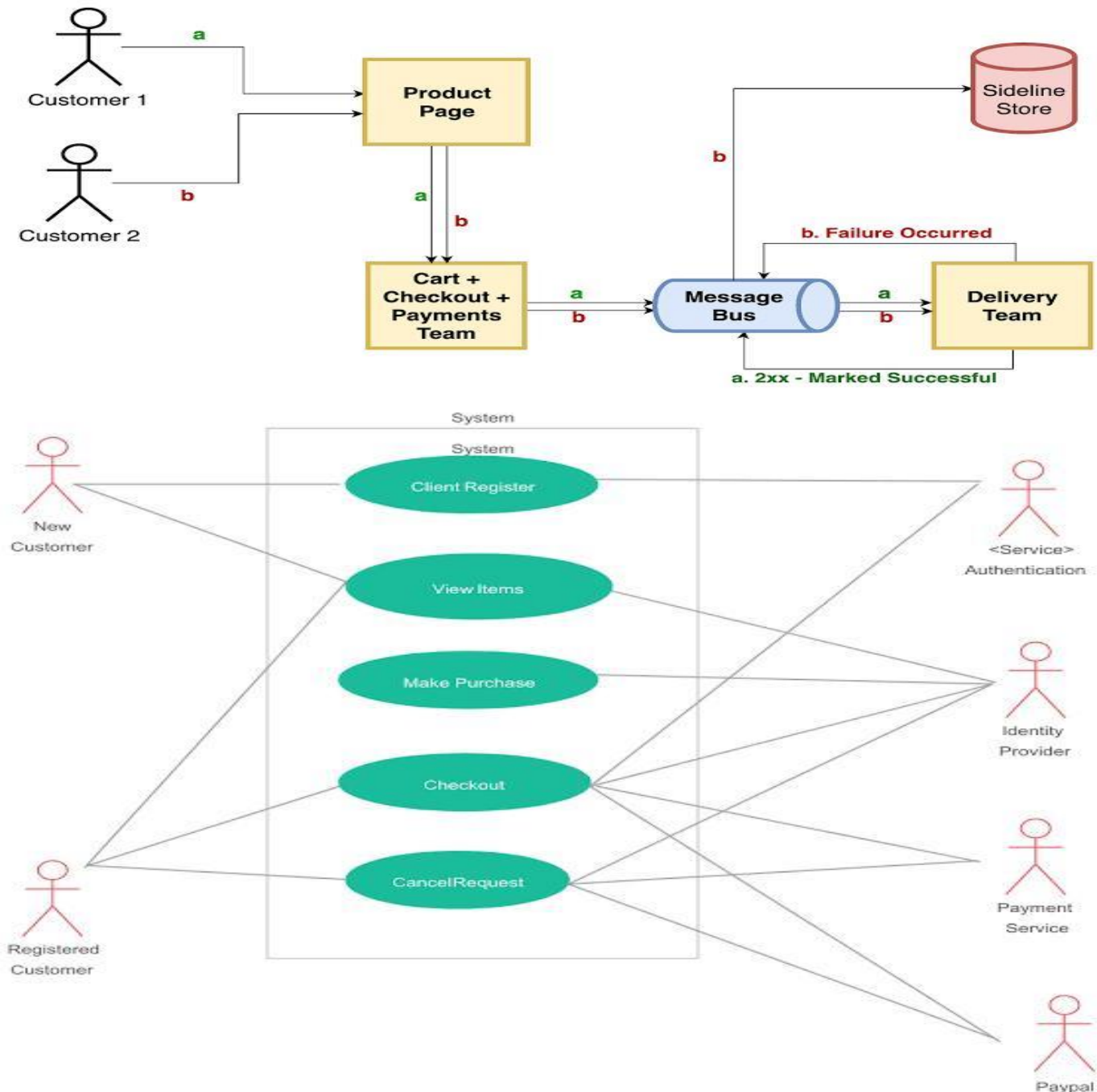
vi. Maintenance:- This phase includes on going support, bug fixes, and updates to the software.

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

Ans:- A data flow diagram (DFD) is a graphical or visual representation using a standard set of symbols and notation to describe a business's operations through data movement.

➤ DFD diagram on Flipkart:-

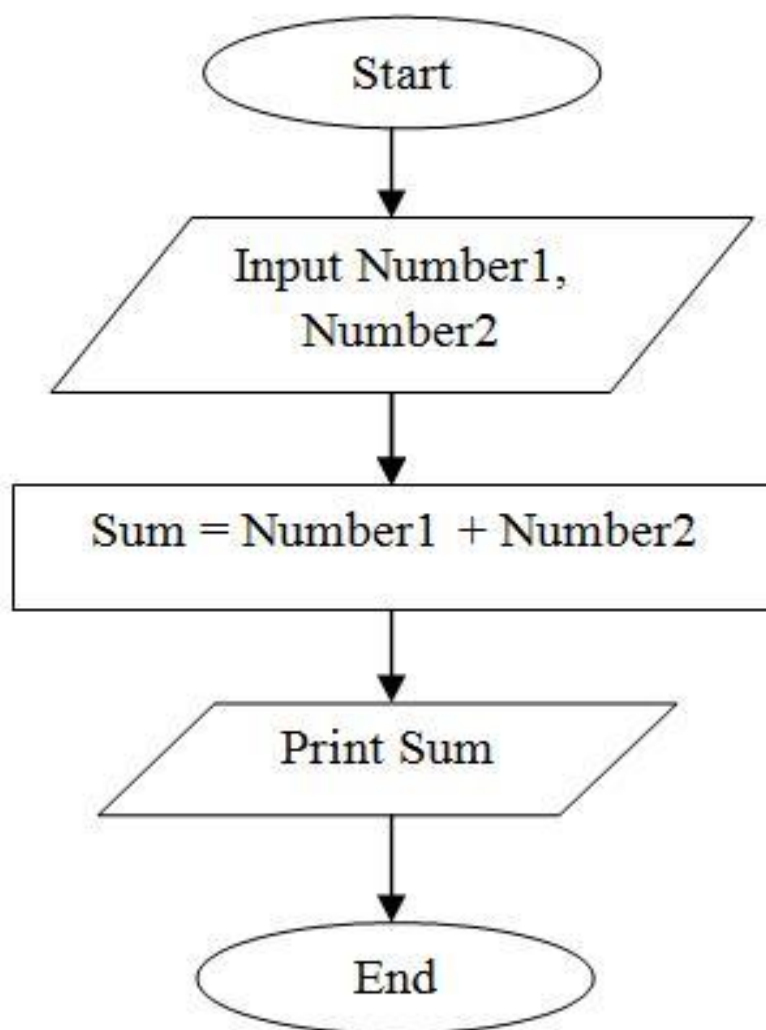


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5. What is Flow chart? Create a flowchart to make addition of two numbers.

Ans:- Flowchart is a symbolic or diagrammatic representation of an algorithm. It uses several geometrical figures to represent the operations, and arrows to show the direction of flow.

➤ **Flowchart to make addition of two numbers:-**



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

Ans:- Use case diagrams describe the high-level functions and scope of a system. These diagram also identify the interactions between the system and its actors.

➤ **Use case diagram on bill payment on paytm:-**

