Software Testing Assignment

❖ Module 01

- **What is SDLC?**

=> SDLC is a process for planning, creating, testing and deploying an information system.

- **What is agile methodology?**

=> Agile methodology is a way to manage a project by breaking it up into several phases.

- **What is SRS?**

=> A software requirements specification is a complete description of the behavior of the system to be developed.

- **What is oops?**

=> Object Oriented Programming is a computer programming model that organizes software design around data, or objects, rather than functions and logic.

- **Write basic concepts of oops.**

=> Basic Concepts of oops.

1. Object.
2. Class.
3. Abstraction.
4. Encapsulation.
5. Inheritance.
6. Polymorphism.

- **What is object?**

=> Object is any living thing which has its own state and behavior like a car, book, etc…

- **What is class?**

=> Class is a group of objects that share common properties and behavior.

Or

=> Collection of objects.

- **What is encapsulation?**

=> Encapsulation is the practice of including in an object everything it needs hidden from other objects.

Or

=> Binding of data or wrapping up of data.

- **What is inheritance?**

=> Inheritance is the process by which genetic information is passed on from parent to child.

Or.

=> When a class derives from another class.

- **What is polymorphism?**

=> Polymorphism is the provision of a single interface to entities of different types, or the use of a single symbol to represent multiple different types.

Or

=> Many ways to perform anything.

- **What is RDBMS?**

=> The software used to store, manage, query, and retrieve data stored in a relational database is called relational database management system.

- **What is SQL?**

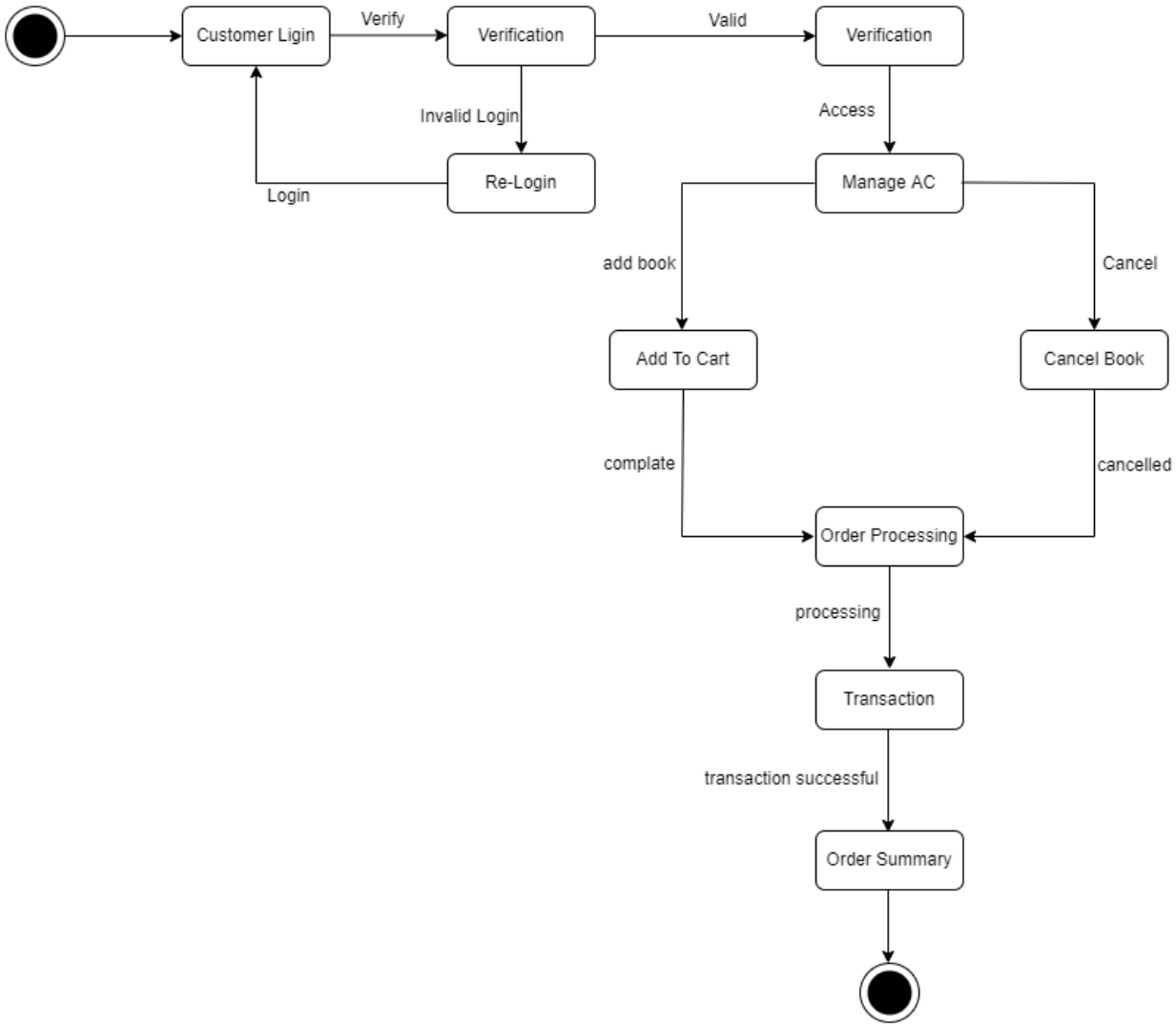
=> SQL is Structured Query Language, which is a computer language for storing, manipulating and retrieving data stored in relational databases.

- **Write SQL Commands.**

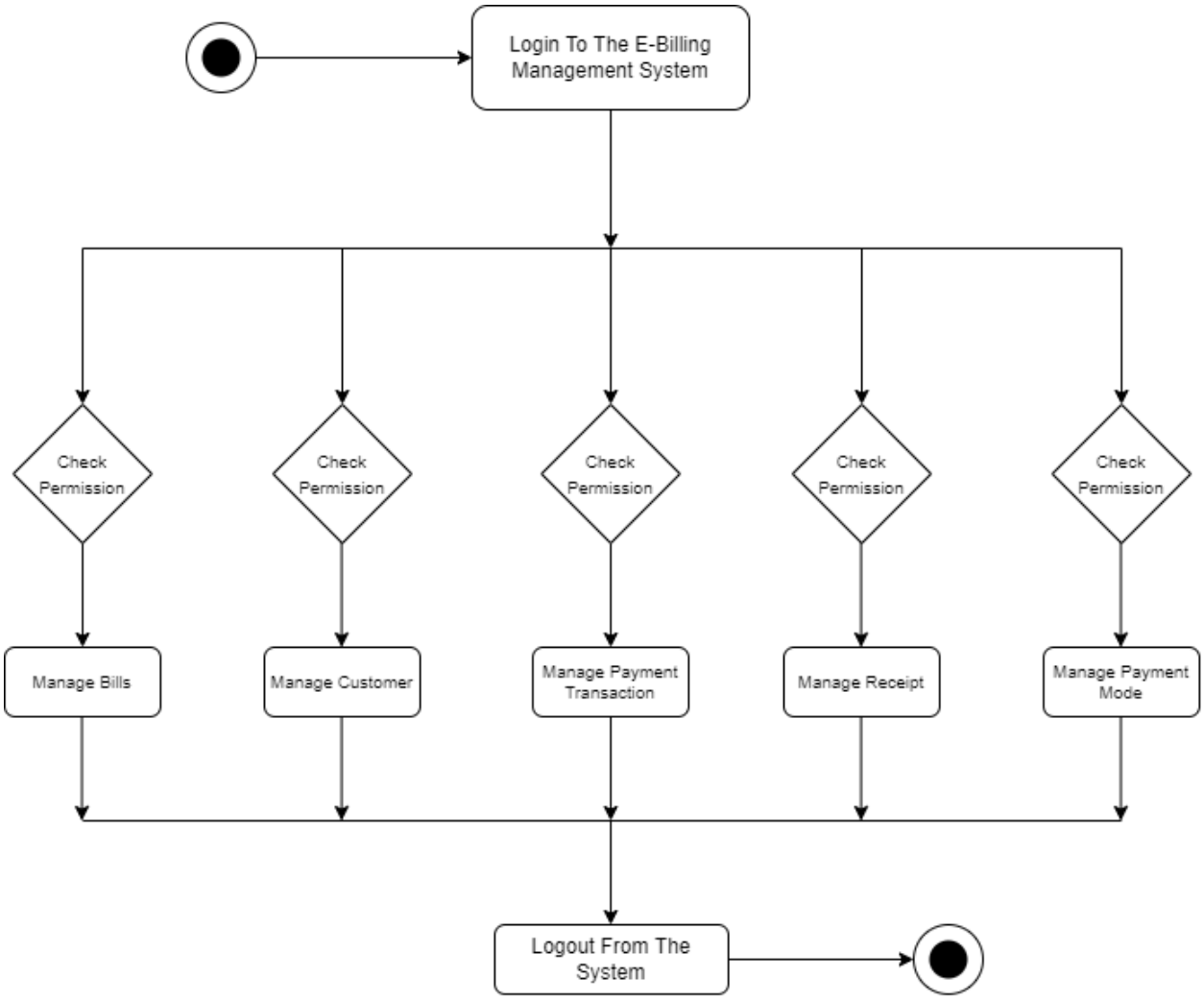
=> SQL Commands,

1. DDL – Data Definition Language
2. DML – Data Manipulation Language
3. DCL – Data Control Language
4. DQL – Data Query Language

- **Draw Usecase on Online book shopping.**



- **Draw Usecase on online bill payment system (paytm).**



- **Write SDLC phases with basic introduction.**

=> There are six phases of SDLC.

Requirements Gathering	stablish Customer Needs
Analysis	Model And Specify the requirements- “What”
Design	Model And Specify a Solution – “Why”
Implementation	Construct a Solution In Software
Testing	Validate the solution against the requirements
Maintenance	Repair defects and adapt the solution to the new requirements

- **Explain Phases of the waterfall model.**

=> Waterfall model has six phases: requirement, analysis, design, coding, testing and maintenance.

1. Requirements Gathering - Establish Customer Needs
2. Analysis Model And Specify the requirements- “What”
3. Design Model And Specify a Solution – “Why”
4. Implementation Construct a Solution In Software
5. Testing Validate the solution against the requirements
6. Maintenance Repair defects and adapt the solution to the new requirements

- **Write phases of spiral model.**

=> The Spiral model has four phases.

1. Planning :- Determination of objectives, alternatives and constraints.
2. Risk Analysis :- Analysis of alternatives and identification/resolution of risks.
3. Engineering :- Development of the ‘Next Level’ products.
4. Customer Evalutional :- Assessment of the result of engineering.

- Write agile manifesto principles.

=> Four manifesto principles are here,

1. **Individuals and interactions** :- in agile development, self-organization and motivation are important, as are interactions like co-location and pair programming.

2. **Working software** :- Demo working software is considered the best means of communication with the customer to understand their requirement, instead of just depending on documentation.

3. **Customer collaboration** :- As the requirements cannot be gathered completely in the beginning of the project.

4. **Responding to change** - agile development is focused on quick responses to change and continuous development.

- **What is join?**

=> Join used to fetch or combine data from two or more tables based on the defined conditions.

- **Write type of joins.**

=> Four types of joins.

1. **Left Join** :- Return all records from the left table and the matched records from the right table.

2. **Right Join** :- Return all the rows of the table on the side of the join and matching rows for the table on the left side of the join

3. **Inner Join** :- Return all rows from both participating tables where the key record of one table is equal to the key records of another table.

4. **Outer Join** :- Joins that return matched values and unmatched values from either or both tables.

- **Explain working methodology of agile model and also write pros and cons.**

=> The agile methodology is a way to manage a project by breaking it up into several phases. It involves constant collaboration with stakeholders and continuous improvement at every stage. Once the work begins, teams cycle through a process of planning, executing and evaluating.

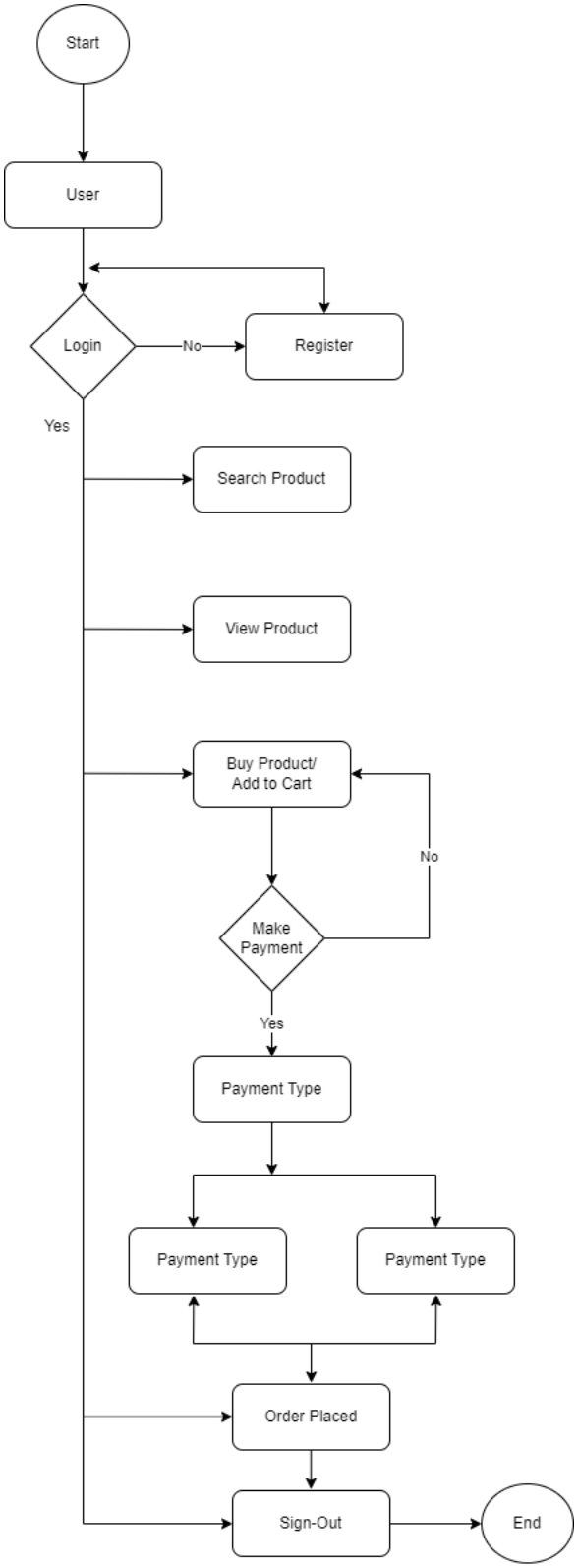
-: Pros :-

- Is a very realistic approach to software development.
- Functionality can be developed rapidly and demonstrated.
- Resource requirements are minimum.
- Suitable for fixed or changing requirements.
- Delivers early partial working solutions.
- Easy to manage.
- Enables concurrent development and delivery within an overall planned context.

-: Cons :-

- More risk of sustainability, maintainability and extensibility.
- Strict delivery management dictates the scope, functionality to be delivered, and adjustments to meet the deadlines.
- There is very high individual dependency, since there is minimum documentation generated.

- **Draw use case on Online shopping products using COD.**



- **Draw usecase on Online shopping product using payment gateway.**