# Software Testing Assignment

## Module-1(Fundamental)

1. What is SDLC
   - Software development life cycle is the series of steps or phases that provide model for the development and life cycle management of software.
   - Phases of SDLC

   1) Requirement Gathering

   => There is two types of requirement.

   a) Functional

   b) Non-Functional

   2) Analysis

   => Specify the requirements

   3) Design

   => Specify the solution.

   4) Implementation(coding)

   => Construct solution.

   5) Testing

   => Validate the solution against the requirements.

   6) Maintenance

   => There are three types of Maintenance.

   a) Corrective - Identify and correct the defects

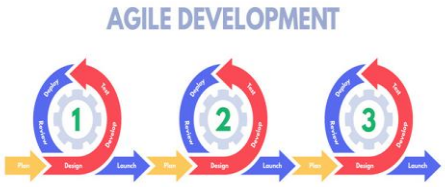
b) Adaptive- Identify and correct with new platform.

c) Perfective- Add new requirement.

2. What is agile methodology?

- Agile is a software development approach that provides continuous delivery of software to build applications in many iterations.
- There is No deadline in agile model.
- Agile model is not suitable for delivery management bcz there is no deadline.
- Agile Manifesto:

1. Customer collaboration over contract negotiation
2. Responding to change over following a plan
3. Individuals and interactions over processes and tools
4. Working software over comprehensive documentation




3. What is SRS?

- A software requirements specification is a complete description of the behavior of the system to be developed.
- Types of SRS
  1. Functional Requirement specification.
  2. Non Functional Requirement specification.
  3. Costumer Requirement specification.o

4. What is oops?

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

5. Write basic concepts of oops.

- Basic Concept of oops
    1. Object
    2. Class
    3. Abstraction
    4. Encapsulation
    5. Inheritance
    6. Polymorphism

6. What is object?

- Object is any living thing which has its own state and behavior. Ex. Paper, Pen, Bag etc...

7. What is class?

- Collection of objects.

8. What is encapsulation?

- Binding of data or wrapping up of data.

9. What is inheritance?

- When one object acquires all the properties and behavior of parent class.

10. What is polymorphism?

- Many ways to perform anything.

11. What is RDBMS?

- RDBMS stands for Relational Database Management System. RDBMS is the basis for SQL, and for all modern database systems like MS SQL Server, IBM DB2, Oracle, MySQL, and Microsoft Access.

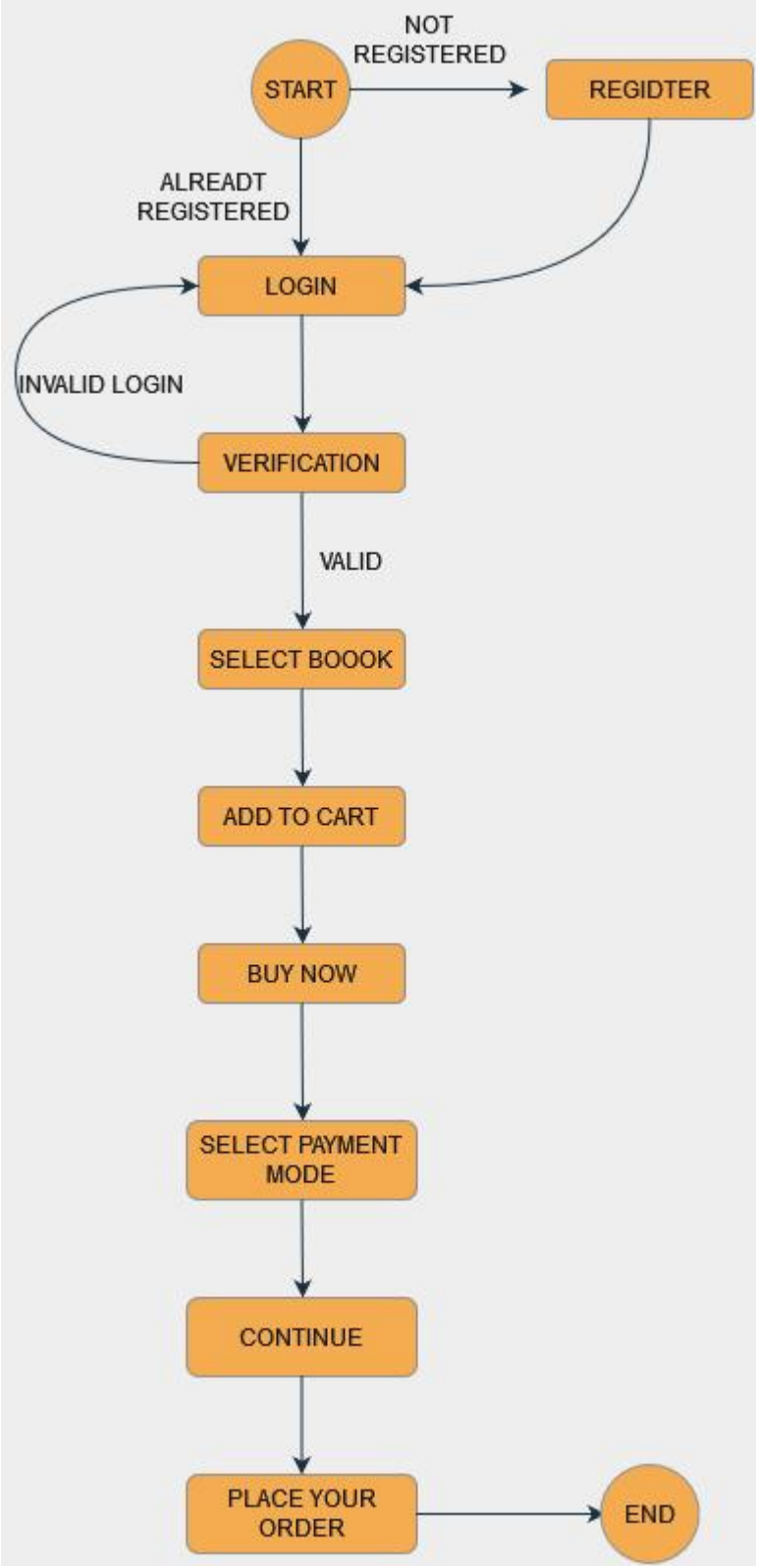
12. What is SQL?

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

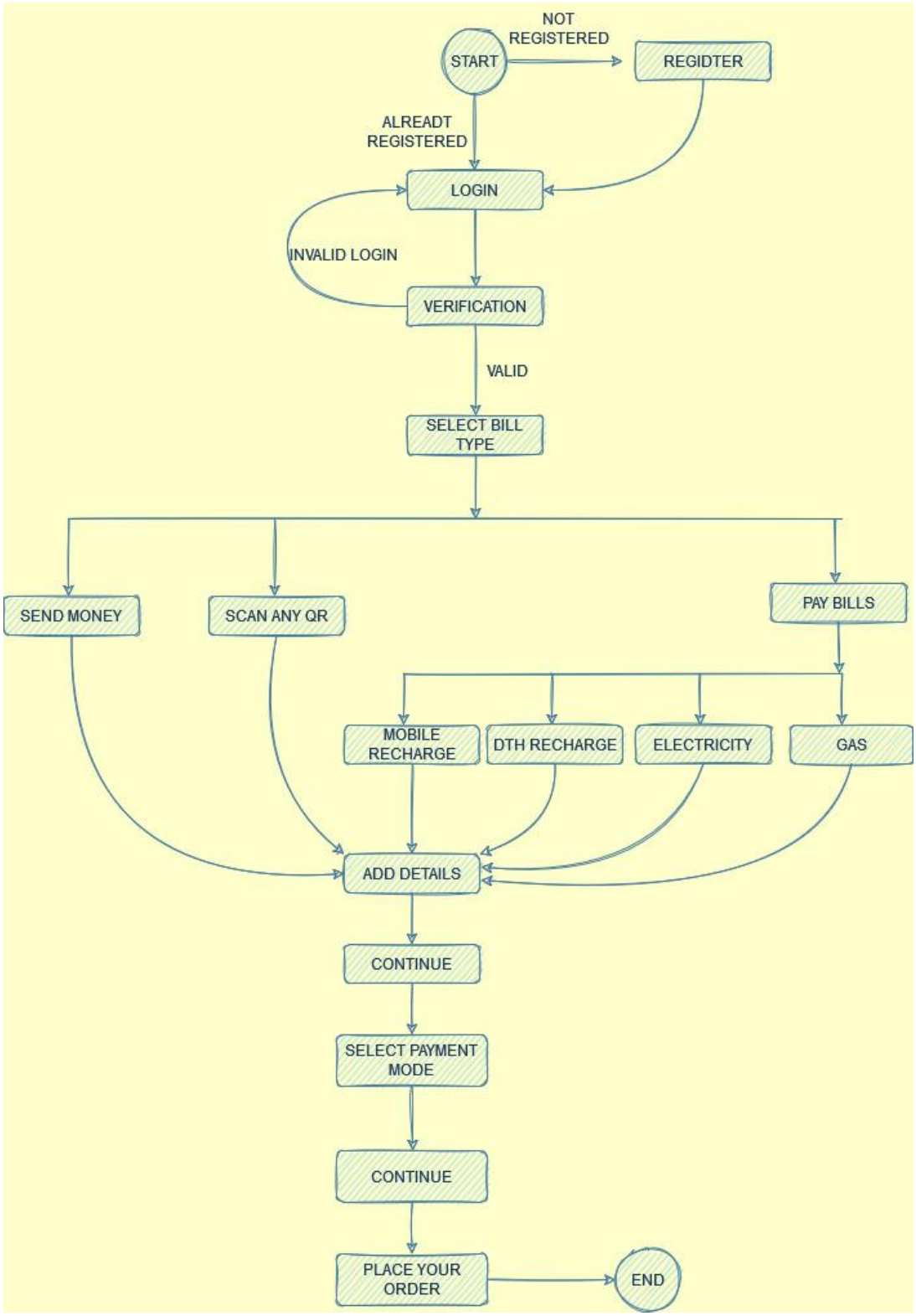
13. Write SQL Commands.

- Commands:
  1) DDL - data definition language
     create, alter, drop, truncate, rename
  2) DML - data manipulation language
     insert, update, delete
  3) DQL - data query language
     select
  4) DCL - data control language
     rollback, commit

14. Draw Use case on Online book shopping.



15. Draw Use case on online bill payment system (Paytm)



16. Write SDLC phases with basic introduction.

- Phases of SDLC

1) Requirement Gathering: Establish Customer Needs

=> There is two types of requirement.

a) Functional

b) Non-Functional

2) Analysis

=> Specify the requirements

3) Design

=> Specify the solution.

4) Implementation(coding)

=> Construct solution.

5) Testing

=> Validate the solution against the requirements.

6) Maintenance

=> There are three types of Maintenance.

a) Corrective - Identify and correct the defects

b) Adaptive- Identify and correct with new platform.

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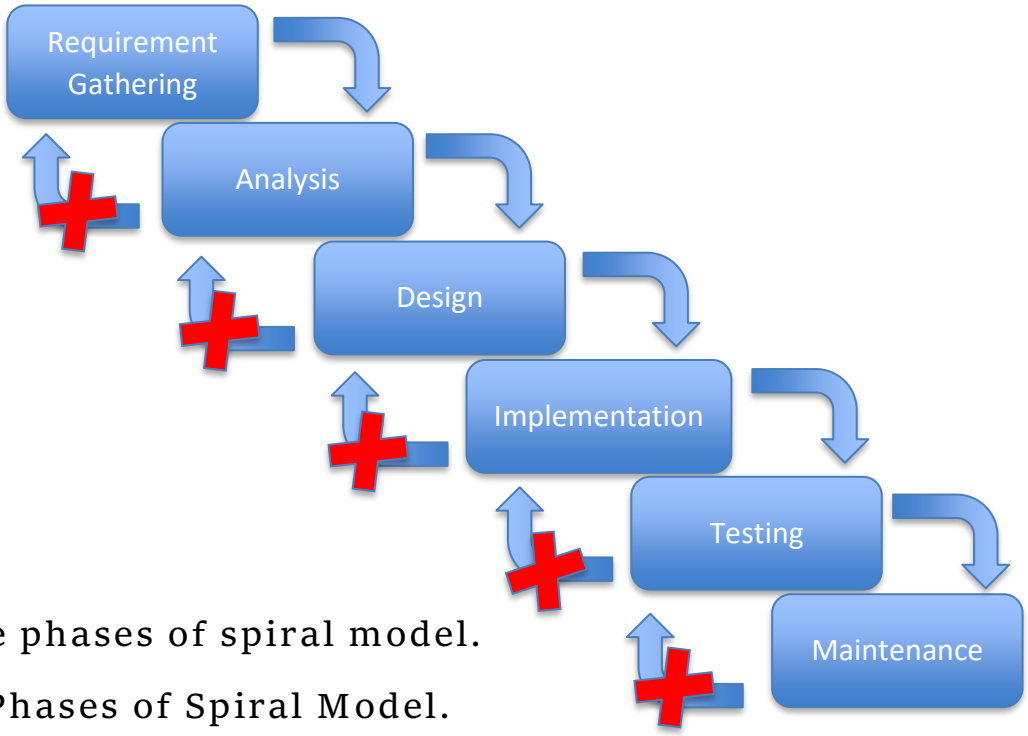
17. Explain Phases of the waterfall model.

- Waterfall model has six phases:
  Requirement Gathering, Analysis, Design, Implementation, Testing and Maintenance.




18. Write phases of spiral model.

- Phases of Spiral Model.
  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 Evolutional: - Assessment of the result of engineering.

19. Write agile manifesto principles.

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 due to various factors.
4. Responding to change: Agile development is focused on quick responses to change and continuous development.

20. What is join?

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

21. Write type of joins.

- INNER JOIN: returns rows when there is a match in both tables.
- LEFT JOIN: returns all rows from the left table, even if there are no matches in the right table.
- RIGHT JOIN: returns all rows from the right table, even if there are no matches in the left table.
- FULL JOIN: returns rows when there is a match in one of the tables. DDL - Data Definition Language.

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

- Agile Methods break the product into small incremental builds.
- These builds are provided in iterations.
- Each iteration typically lasts from about one to three weeks.
- Every iteration involves cross functional teams working simultaneously on various areas like planning, requirements analysis, design, coding, unit testing, and acceptance testing.

- At the end of the iteration a working product is displayed to the customer and important stakeholders

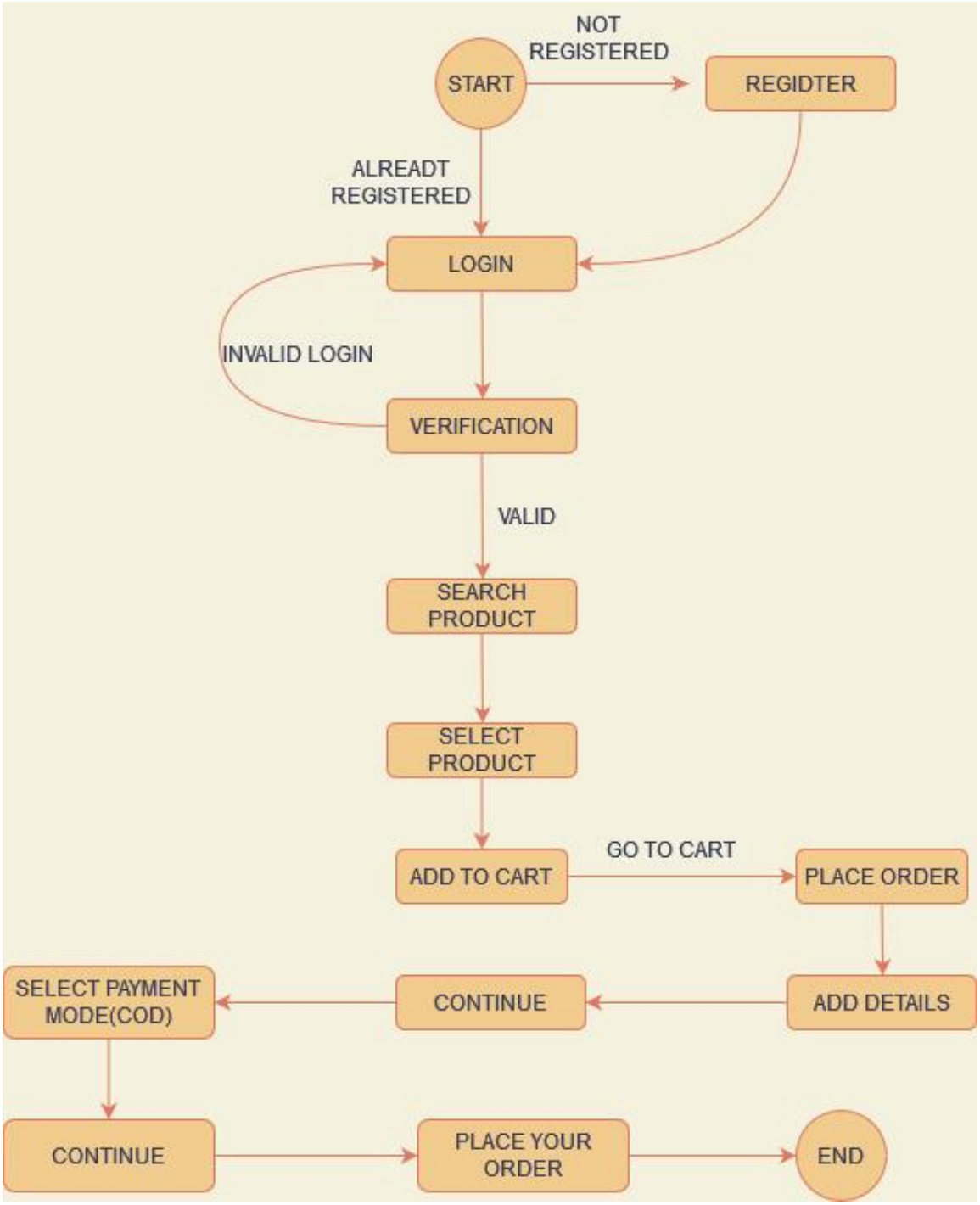
Pros:

- Little or no planning required
- Easy to manage
- Is a very realistic approach to software development.
- Promotes teamwork and cross training.
- Gives flexibility to developers

Cons.:

- More risk of sustainability, maintainability and extensibility.
- Transfer of technology to new team members may be quite challenging.
- There is very high individual dependency, since there is minimum documentation generated.
- May be not suitable for delivery management because there is a no deadline.

23. Draw use case on Online shopping product using COD.



24. Draw use case on Online shopping product using payment gateway.