

Software Testing Assignment

• Module–1(Fundamental)

1. What is SDLC

:- SDLC Stands For Software Development Life Cycle. A Software Development Life Cycle is a series of steps, or phases, that provide a model for the development and lifecycle.

:- six phases of SDLC.

1. Requirements Gathering.

2. Analysis

3. Design

4. Implementation

5. Testing

6. Maintenance.

2.What is software testing?

:- Software Testing is a process used to identify the correctness,completeness, and quality of developed computer software.

3.What is agile methodology?

:- Agile SDLC model is a combination of iterative and incrementalprocess models.

4.What is SRS?

:- SRS Stands For Software Requirement Specification.

:-A software requirements specification (SRS) is a complete descriptionof the behavior of the system to be developed.

:- There are 3 Types of Requirements.

1. Customer Requirements.
2. Functional Requirements.
3. Non-Functional Requirements.

5.What is oops?

:oops stands for Object-Oriented programming System.

6. Write Basic Concepts of OOPS.

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

7. What is object.

:Any entity which has own state and behaviour is called as object.

Ex : pen/paper/etc..

8. What is Class.

: Class is a collection of object.

: An object is a particular instance of a class.

Ex :Human Body.

9. What is encapsulation .

: encapsulation is a Wrapping up of data or Binding of data.

Ex : capsule.

10. What is inheritance.

:- Inheritance means that one class inherits the characteristics of another class.

Ex : Father-son

11. What is polymorphism .

:- polymorphism is a many ways to perform anything.

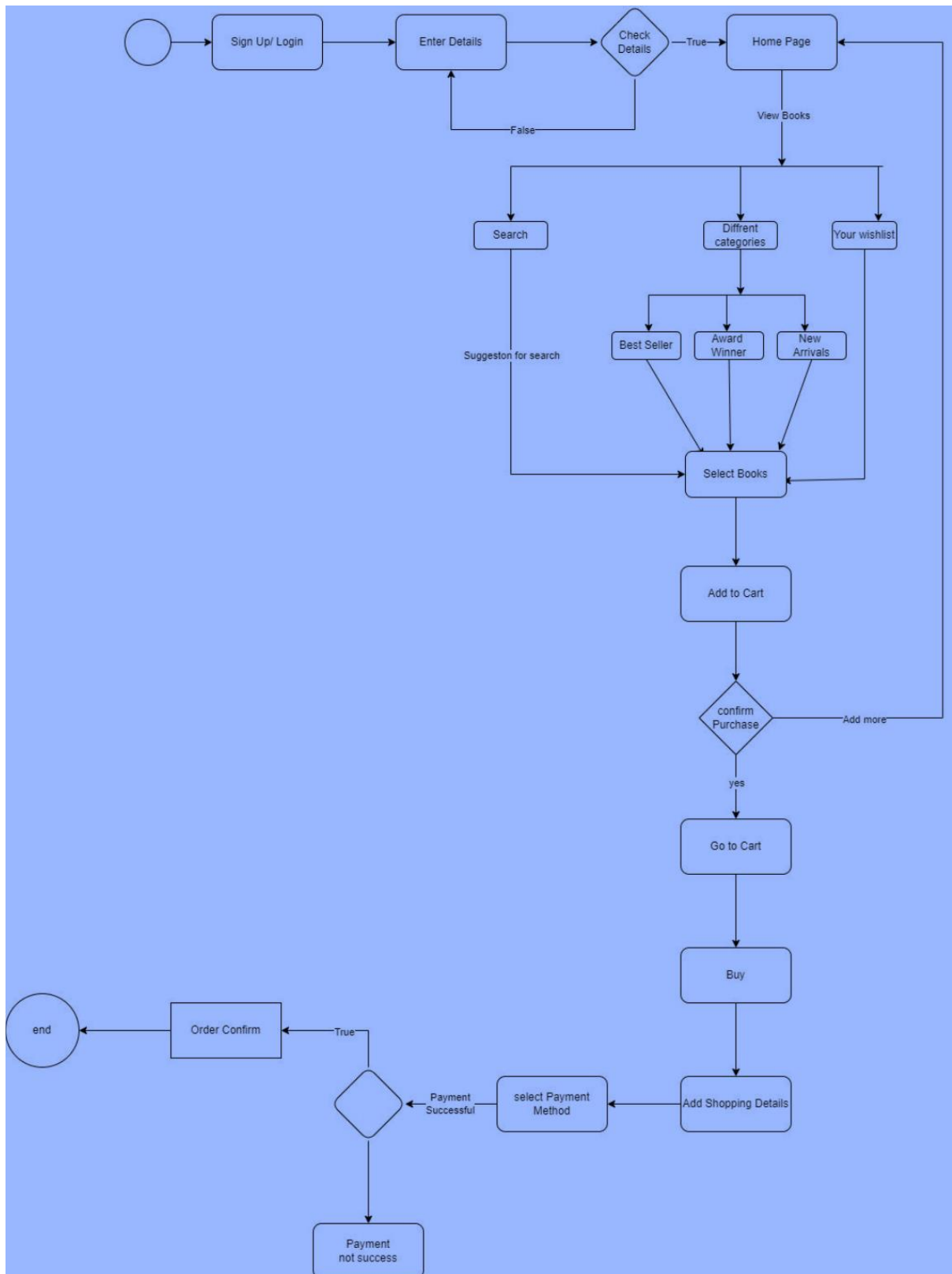
:- It allows different objects to respond to the same message in different ways, the response specific to the type of the object.

:- There are two types of polymorphism.

1. Method overloading.
2. Method overriding.

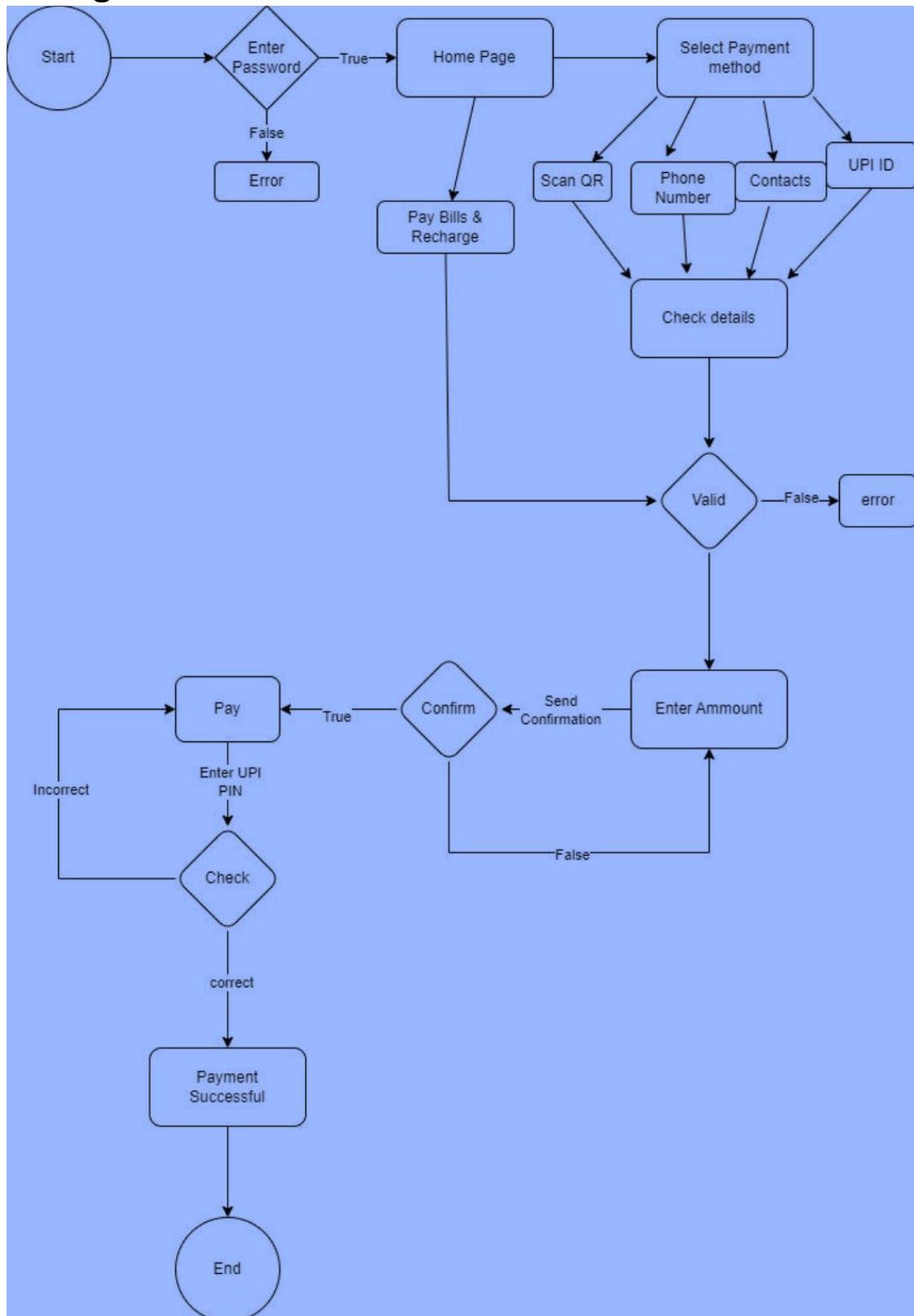
12. Draw Use case on Online book shopping.

:- Diagram



13. Draw Use case on online bill payment system (paytm) .

:- Diagram



14. Write SDLC phases with basic introduction.

:- SDLC Stands For Software Development Life Cycle.

:- six phases of SDLC.

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::-1. Requirements Gathering Phase.

:- Requirements definitions usually consist of natural language, supplemented by diagram and tables.

:- Types of Requirements:

1. Functional Requirements.

2. Non-Functional Requirements.

::-2. Analysis Phase.

:- This phase starts with the requirement document delivered by the requirement phase and maps the requirements into architecture.

:- The deliverable design document is the architecture.

:- This phase represents the “what” “how” phase.

::-3. Design Phase .

:- The Design team can now expand upon the information established in the requirement document.

:- The requirement document must guide this decision process.

::-4.Implementation Phase .

:- In the implementation phase, the team builds the components either from scratch or by composition.

::-5. Testing Phase .

:- Simply stated, quality is very important.

:- A customer satisfied with the quality of a product will remain loyal and wait for new functionality in the next version.

::-5. Maintenance Phase .

:- Software maintenance is also one of the phases in the System Development Life Cycle (SDLC), as it applies to software development.

:- The maintenance phase is the phase which comes after deployment of the software into the field.

:- There are 3 types of maintenance.

1. **Corrective maintenance.**

2. **Adaptive maintenance.**

3. **Perfective Maintenance.**

15. Explain Phases of the waterfall model.

:-The Waterfall Model is a linear and sequential approach to software development. It's like a step-by-step guide, where each phase must be completed before moving on to the next phase.

:-Requirement Analysis :

Gather all the necessary information and requirements from the client or end-user.

Document what the software should do and any constraints.

:-System Design :

- Plan the overall architecture of the system.
- Create design documents specifying how the software will work, including hardware and system requirements.

:- Implementation :

- Write the actual code based on the system design documents.
- Develop the software components and integrate them.

:- Integration and Testing :

- Test the software to ensure it meets the requirements and is free of bugs.
- Perform different types of testing (unit, system, integration) to validate the software.

:- Deployment :

- Release the software to users for them to use.
- Ensure the software is installed and running smoothly in the user's environment.

:- Maintenance :

- Fix any issues or bugs that arise after deployment.
- Update the software as needed to adapt to new requirements or changes in the environment.

16. Write phases of spiral model ?

:-The Spiral Model is an iterative and risk-driven approach to software development, combining elements of both design and prototyping. It allows for multiple iterations, helping to

manage risks and refine the product. Here's a simple breakdown of the phases:

:-Planning :

- Identify objectives, constraints, and requirements for the current iteration.
- Plan the activities and resources needed for the iteration.

:-Risk Analysis :

- Identify potential risks and uncertainties in the project.
- Analyse and evaluate these risks to find ways to mitigate them.

:-Engineering :

- Design and develop a prototype or a version of the software.
- Implement and verify the software features identified in the planning phase.

:-Evaluation and Review :

- Evaluate the progress and quality of the current iteration.
- Get feedback from stakeholders and make necessary adjustments.

:-Each cycle of the spiral model results in the development of a more refined version of the software, incorporating feedback and reducing risks along the way. The process repeats, with each cycle expanding on the previous one, until the final product is complete. This iterative approach allows for flexibility and adaptation to changing requirements.

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

:-PROS.

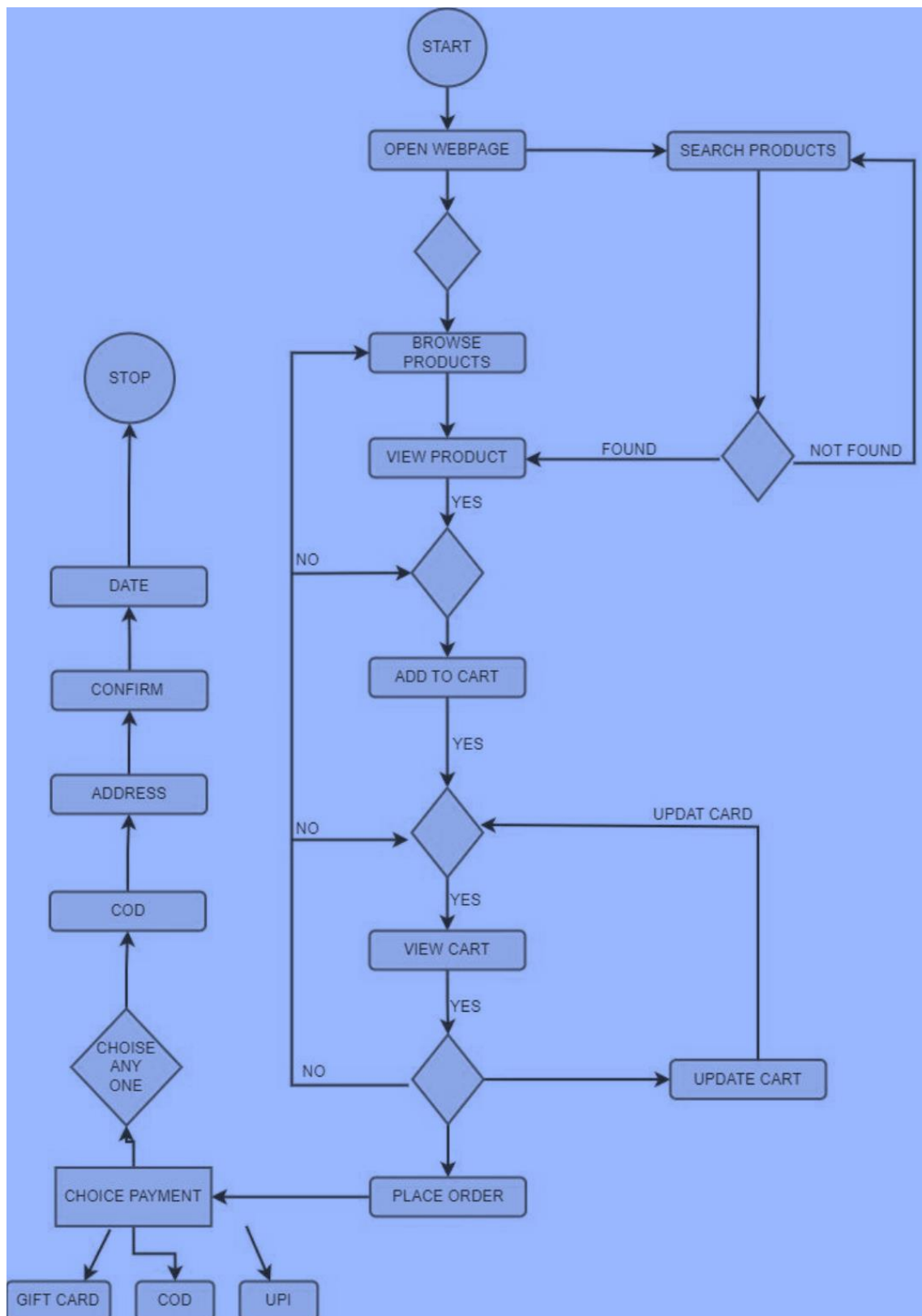
- Is a very realistic approach to software development Promotes teamwork and cross training.
- Functionality can be developed rapidly and demonstrated.
- Resource requirements are minimum.
- Suitable for fixed or changing requirements Delivers early partial working solutions.
- Good model for environments that change steadily.

:-CONS.

- Not suitable for handling complex dependencies. More risk of sustainability, maintainability and extensibility.
- An overall plan, an agile leader and agile PM practice is a must without which it will not work.
- Strict delivery management dictates the scope, functionality to be delivered, and adjustments to meet the deadlines.
- Depends heavily on customer interaction, so if customer is not clear, team can be driven in the wrong direction.

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

:- Diagram



Q.20 Draw usecase on Online shopping product using payment gateway.

