1. What is SDLC

Ans. Software development life cycle is a structure imposed on the development of the software product that defines the process for planning, implementation, testing, documentation, deployment, ongoing maintenance and support.

2. What is agile methodology?

Ans. process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product.

3. What is SRS

Ans. A software requirements specification (SRS) is a complete description of the behaviour of the system to be developed.

4. What is oops

Ans. Identifying objects and assigning responsibilities to these objects.

5. Write Basic Concepts of oops

Ans.

- object
  - Class
  - Encapsulation
  - Inheritance
  - Polymorphism- Overriding
    – Overloading
  - Abstraction

6. What is object

Ans.

- An object represents an individual, identifiable item, unit, or entity either real or abstract with well-defined role in the problem domain.
- An "object" is anything to which a concept applies.
- This is the basic unit of object-oriented programming
- That is both data and function that operated on data are bundled as a unit called as object.

7. What is class

Ans.

- Class is define as a blueprint for an object.
- Class represents an abstraction of the object and abstracts the properties and behaviour of that object.

8. What is encapsulation

Ans.

- Encapsulation is the practice of including in an object everything it needs hidden from other objects. The internal state is usually not accessible by other objects.
- It is a process of wrapping up of data and behaviour of an object into a single unit.

- Inheritance means that one class inherits the characteristics of another class. This is also called a relationship.
- This is a very important concept of object oriented programming helps to reduce the code size.

9. What is polymorphism

Ans.

- having many forms
- it allows different objects to respond to the same message in different ways, the response specific to the object.
- The ability to change in form is called polymorphism.

10. What is RDBMS

Ans.

- It is the basis for SQL and for all modern database systems like MS SQL server, IBMDB2, Oracle, MySQL and Microsoft access.
- Which is based on relational database model.

11. What is SQL

Ans.

- SQL is Structured Query Language, which is a computer language for storing, manipulating an retrieving data stored I relational database.

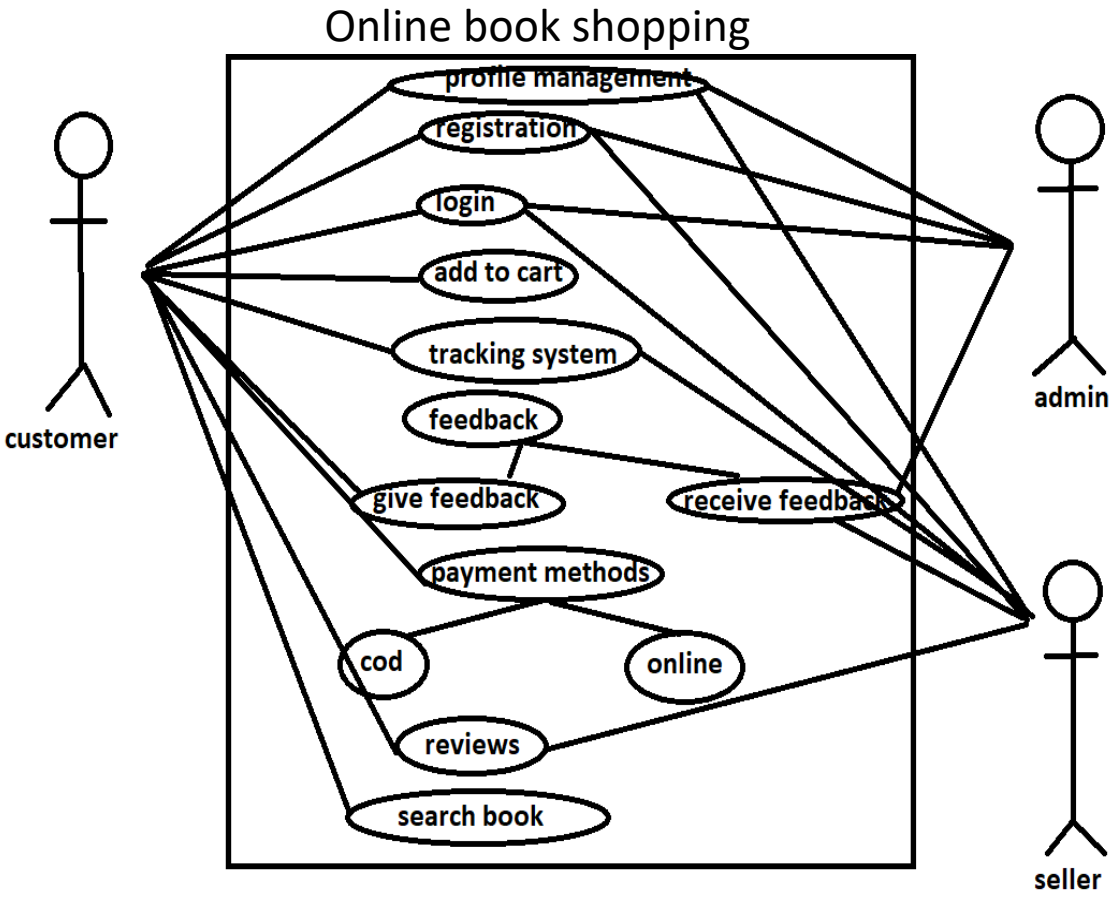
12. Write SQL Commands

Ans.

- **DDL** – Data Definition Language
- **DML** – Data Manipulation Language
- **DCL** – Data Control Language
- **DQL** – Data Query Language

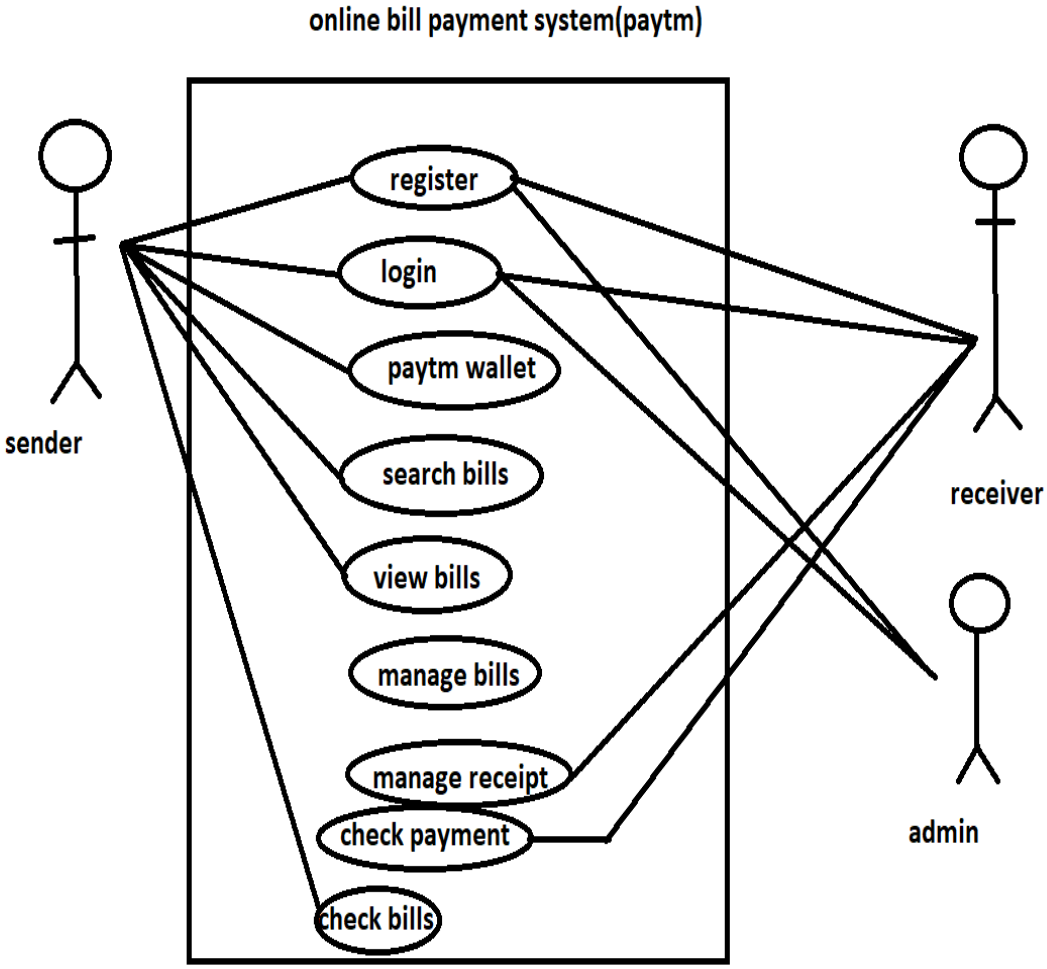
13. Draw Usecase on Online book shopping

Ans.



14. Draw Usecase on online bill payment system (paytm)

Ans.



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

Ans.

Requirements collections/gathering	Establish customer needs
Analysis **design**	Model and soecify the requirements-what Model and specify the solution
implementation	Construct a solution in software
testing	Validation and the soltion against the requirements
maintainence	Repair defect and adapt the solution to new requirements

16. Explain Phases of the waterfall model

Ans.

- Requirements are very well documented, clear and fixed.
- Product definition is stable.
- Technology is understood and is not dynamic.
- There are no ambiguous requirements.
- Ample resources with required expertise are available to support the product.
- The project is short.
    - The classical development lifecycle models the software development as step-by-step "waterfall" between the various development phases.

17. Write phases of spiral model

Ans.

- There are four phases:

(1) Planning: determination of objectives, alternatives and constrains.

(2) Risk analysis: analysis of alternatives and identifications/resolution of risks

(3) Engineering: development of the next level product

(4) Customer evaluation: assessment of the result of engineering

18. Write agile manifesto principles

Ans.

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

• **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.

• **Customer collaboration** - As the requirements cannot be gathered completely in the beginning of the project due to various factors, continuous customer interaction is very important to get proper product requirements.

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

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

Pros

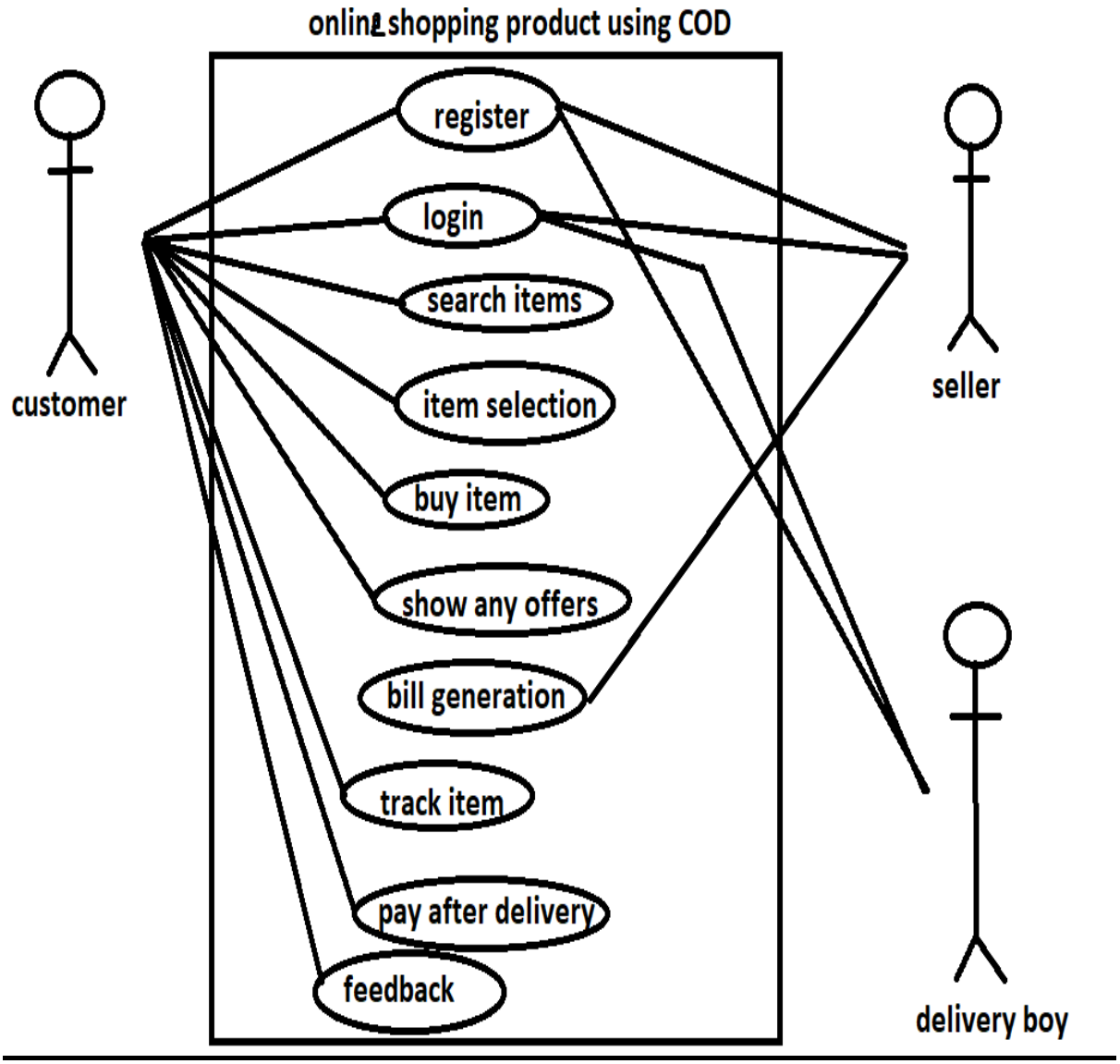
- Is a very realistic approach to software development
- Promotes teamwork and cross training.
- Functionality can be developed rapidly and demonstrated.
- Resource requirements are minimum.
- Suitable for fixed or changing requirements
- Delivers early partial working solutions.
- Good model for environments that change steadily.
- Minimal rules, documentation easily employed.
- Enables concurrent development and delivery within an overall planned context.
- Little or no planning required
- Easy to manage
- Gives flexibility to developers

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.
- There is very high individual dependency, since there is minimum documentation generated.
- Transfer of technology to new team members may be quite challenging.

20. **Draw use case on Online shopping product using COD.**

Ans.



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

Ans.