1) What is SDLC ?

A Software Development Life Cycle is essentially a series of steps, or phases, that provide a model for the development and lifecycle management of an application or piece of software.

It is the life cycle management for the piece of software or Application.

2) What is software testing?

-> Testing is the process of evaluating a system or its component(s) with the intent to find that whether it satisfies the specified requirements or not.

->Testing is executing a system in order to identify any gaps, errors or missing requirements in contrary to the actual desire or requirements.

-> The process consisting of all life cycle activities, both static and dynamic, concerned with planning, preparation and evaluation of software products and related work products to determine that they satisfy specified requirements, to demonstrate that they are fit for purpose and to detect defects.

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

3) What is agile methodology ?

-> It is a Combination iterative and Incremental model.

->It provides the software into small incremental builds, this build are provided in iteration , that means the big projects are divided into small chunk.

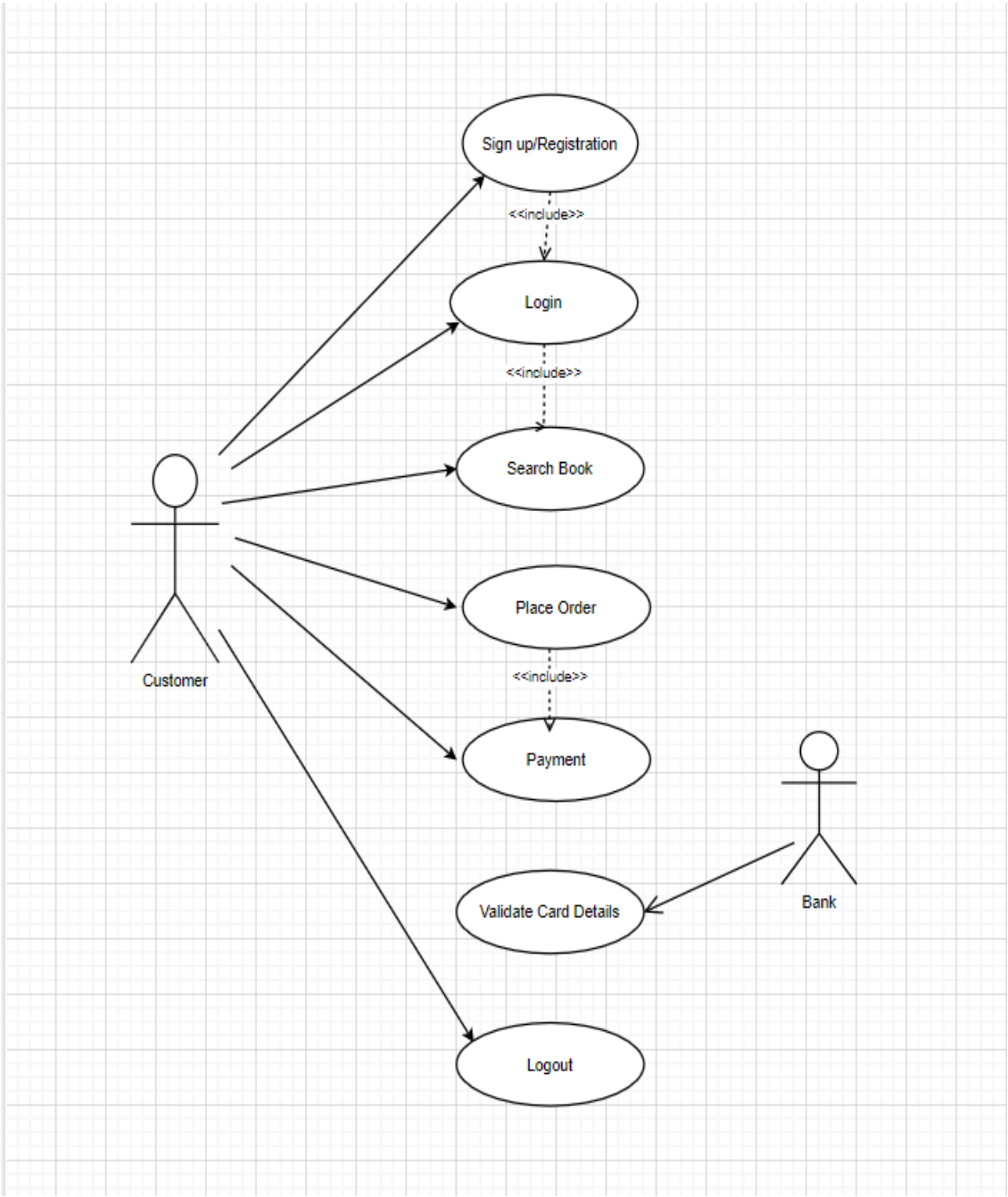
-> Each iteration involves all the team members working simultaneously on areas like planning, requirements, designs, coding, unit testing and acceptance testing.

4) What is SRS ?

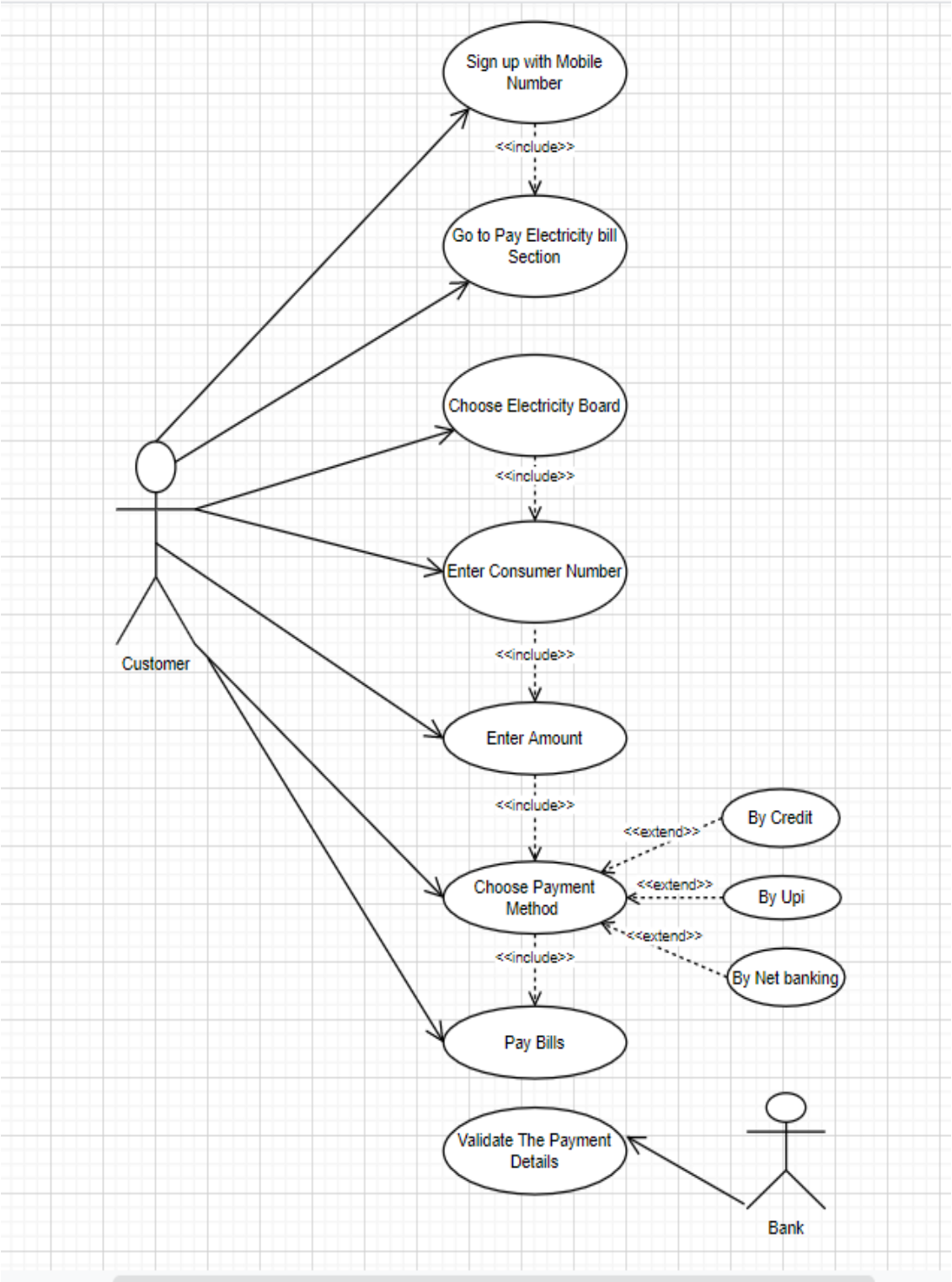
->A software requirements specification (SRS) is a complete description of the behavior of the system to be developed.

-> It includes a set of use cases that describe all of the interactions that the users will have with the software.

5) Draw Usecase on Online book shopping



6) Draw Usecase on online bill payment system (paytm)



7) Write SDLC phases with basic introduction

-> Phases of SDLC:-

1. Requirement Gathering
2. Planning/Analysis Phase
3. Design phase
4. Implementation Phase
5. Testing phase
6. Deployment
7. Maintenance Phase

1.Requirement Gathering :- During this phase, all the relevant information is collected from the customer to develop a product as per their expectation. Any ambiguities must be resolved in this phase only.

2. Planning/Analysis Phase:- Details on computer programming languages and environments, machines, packages, application architecture, distributed architecture layering, memory size, platform, algorithms, data structures, global type definitions, interfaces, and many other engineering details are established.

-> Risk of the project

-> Cost of the projects

-> Time of completion

3.Design Phase:- In this phase, the requirement gathered in the SRS document is used as an input and software architecture that is used for implementing system development is derived.

4. Implementation Phase :- Implementation/Coding starts once the developer gets the Design document. The Software design is translated into source code. All the components of the software are implemented in this phase.

5.Testing phase :- Testing starts once the coding is complete and the modules are released for testing. In this phase, the developed software is tested thoroughly and any defects found are assigned to developers to get them fixed.

-> Retesting, regression testing is done until the point at which the software is as per the customer's expectation. Testers refer SRS document to make sure that the software is as per the customer's standard.

6.Deployement Phase :-

Project is live when it will become a product.

7.Maintenance :- Maintenance is the process of changing a system after it has been deployed.

There are 3 types of maintenance :-

- Corrective maintenance: identifying and repairing defects
- Adaptive maintenance: adapting the existing solution to the new platforms.
- Perfective Maintenance: implementing the new requirements

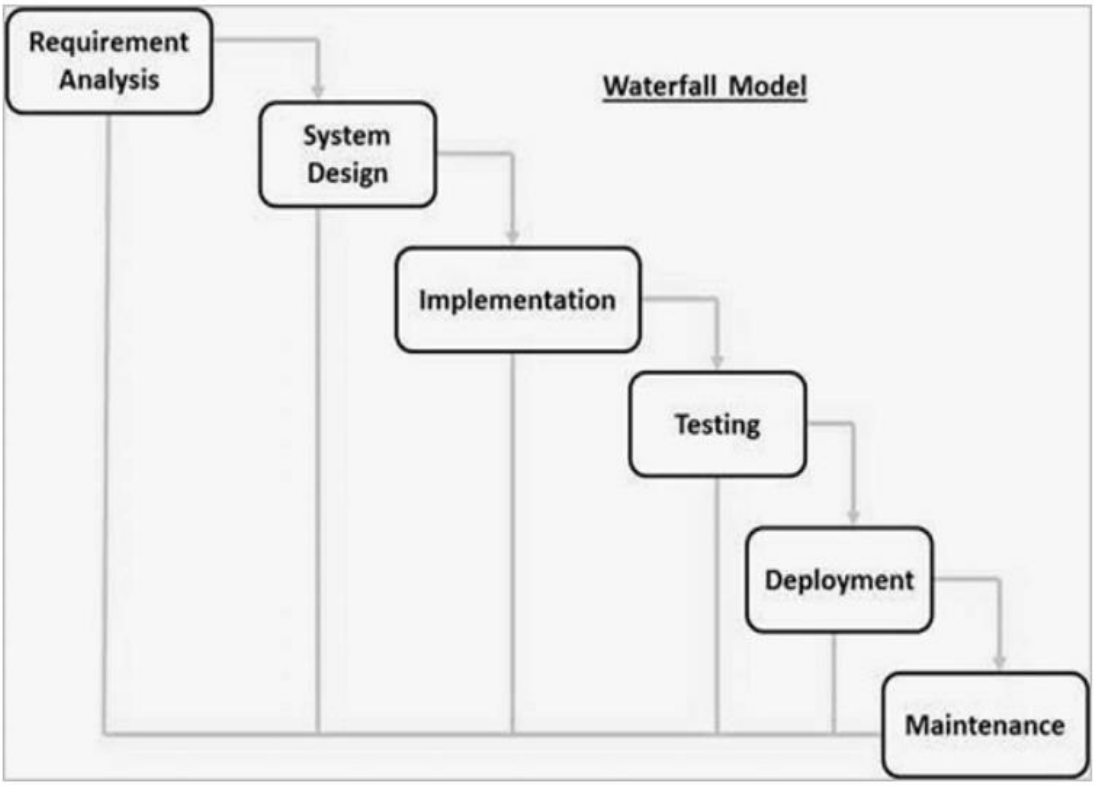
8) Explain Phases of the waterfall model

The waterfall Model illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete. In this waterfall model, the phases do not overlap.

The waterfall is unrealistic for many reasons, especially:

- Requirements must be "frozen" to early in the life cycle
- Requirements are validated too late

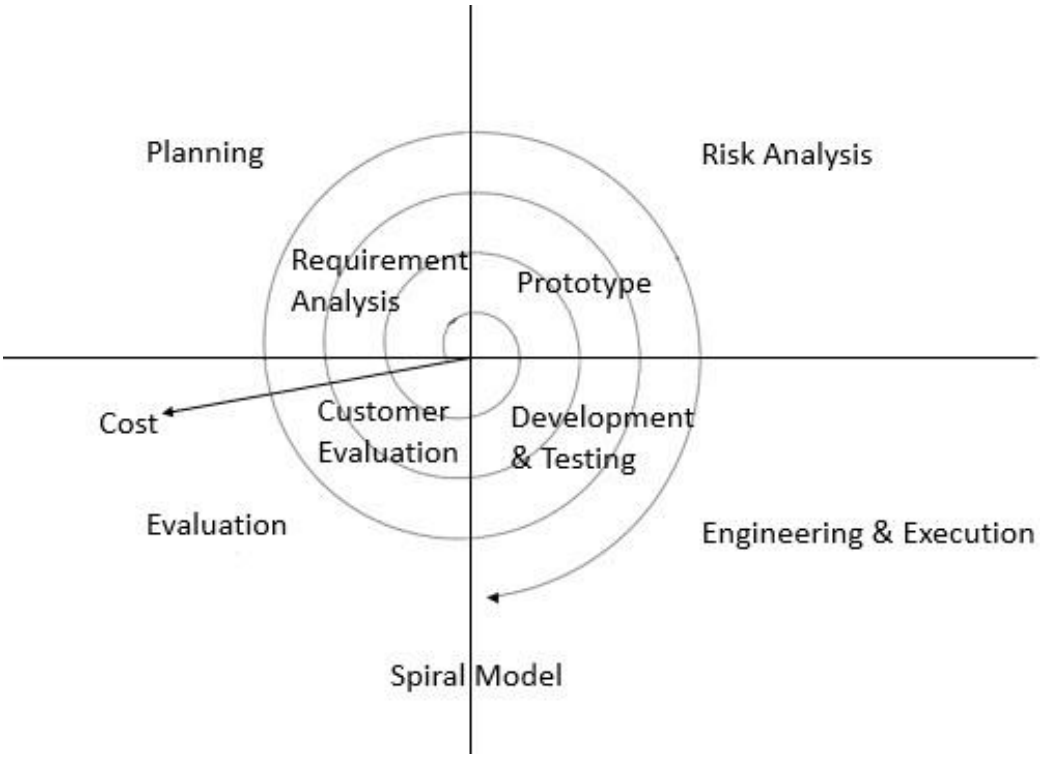
Phase of the waterfall model are same as SDLC.



9) Write phases of spiral model

Spiral Model is very widely used in the software industry as it is in synch with the natural development process of any product i.e. learning with maturity and also involves minimum risk for the customer as well as the development firms.

The Spiral Model is a software development life cycle (SDLC) model that provides a systematic and iterative approach to software development. It is based on the idea of a spiral, with each iteration of the spiral representing a complete software development cycle, from requirements gathering and analysis to design, implementation, testing, and maintenance.



1. Planning: The first phase of the Spiral Model is the planning phase, where the scope of the project is determined and a plan is created for the next iteration of the spiral.

2. Risk Analysis: In the risk analysis phase, the risks associated with the project are identified and evaluated.

3. Engineering: In the engineering phase, the software is developed based on the requirements gathered in the previous iteration.

4. Evaluation: In the evaluation phase, the software is evaluated to determine if it meets the customer's requirements and if it is of high quality.

10) Explain working methodology of agile model and also write pros and cons

Agile SDLC model is a combination of iterative and incremental process models.

It provides the software into small incremental builds, this build are provided in iterations, that means the big projects are divided into small chunk.

Every iteration involves cross functional teams working simultaneously on various areas like planning, requirements analysis, design, coding, unit testing, and acceptance testing.

Each iteration last about one to four weeks.

At the end of the iteration a working product is displayed to the customer and important stakeholders and is released in the market.

After the release we check for the feedback of the deployed software.

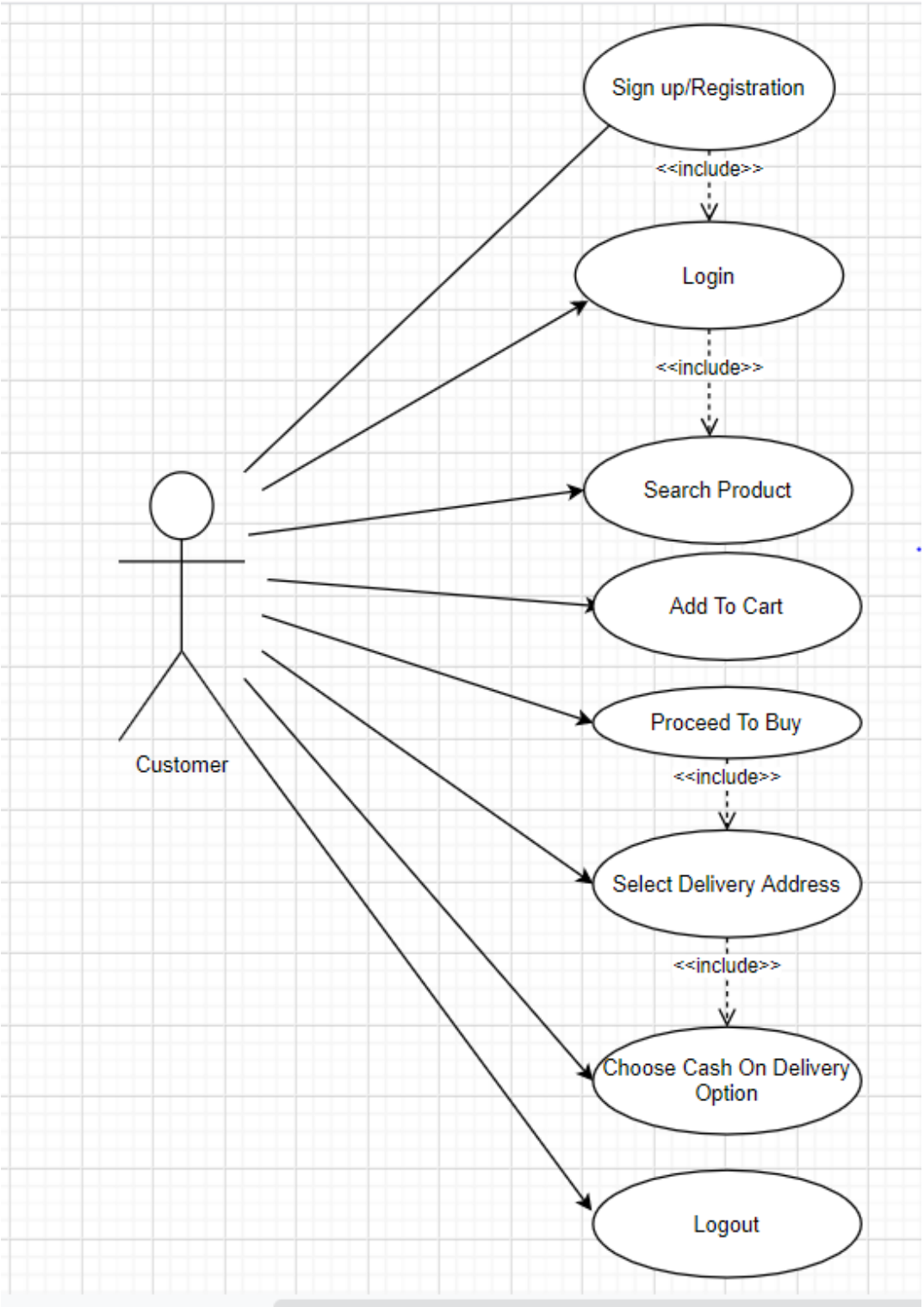
Pros

- 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

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.

11)Draw usecase on Online shopping product using COD.



12) Draw usecase on Online shopping product using payment gateway