Module 1. Assignment

Que 1. What is SDLC ?

Ans : SDLC Full form is Software Develop Life Cycle .

SDLC is a structure imposed on the development of the software product that defines the process for planning , implementation testing , deployment , deployment , and on going maintenance and support .

Que 2. What is Agile Methodology ?

Ans : Agile methodology is combination of the iterative and incremental process model with focus on a process adaptability and customer satisfaction by rapid delivery of working software product .

- Agile Methods break the product into small incremental build .
- These builds are provided in iterations .
- Each iteration typically lasts from about 1 to 3 weeks.
- Every iteration involves cross function teams working simultaneously on various areas like planning , requirements analysis , design , coding , unit testing , and acceptance testing .
- At the end of the iteration working software or product display to the customer and important stakeholders.

Que 3. What is SRS ?

Ans : Full form of SRS is Software Requirement Specification .

- A SRS is a complete description of the behavior of the system to be developed .
- It include set of use cases that describe all of the interactions that the user will have with the software .

Que 4. What is OOPS ?

Ans : Full form of OOPS is Object Oriented Programming .

OOPS is identifying object and assigning responsibilities to these objects.

The main aim of OOPS is to bind together the data and the functions that operate on so that no other part of the code can access this data accept this function .

Que 5. Write basic concepts of OOPS ?

Ans :

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

Que 6. What is Object?

Ans : An object is an instances of class . It is an entity with characteristics and behavior that are used in the object oriented programing . It is realistic thing , and it is real world object .

Que 7. What is Class ?

Ans : It is user defined data type , which holds its own data members and member functions , whch can be accessed and used by creating an instance of that class .

Que 8. What is Encapsulation ?

Ans : In OOP , Encapsulation is defined as binding together the data and the functions that manipulates them .

It is concept of wrapping up data and information .

Que 9. What is Inheritance ?

Ans : Inheritance means that one class inherits the characteristics of another class . This is also called a “is a” relationship .

In simple the capability of a class to derive properties and characetristics from another class is called Inheritance .

1. Superclass
2. Subclass
3. Reusability .

Que 10. What is Polymorphism ?

Ans : the ability to change form is known as polymorphism .

Polymorphism means having many form .

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

The most important aspect of an object is its behaviour (the thing it can do). A behaviour is initiated by sending a message to the object (usually by calling a method).

Que 11. What is RDBMS ?

Ans : Full Form is Relational Database Management System .

A RDBMS is a database management system that is based on the relational model .

It is called relational because table are based or joined on common fields.

Que 12. What is SQL ?

Ans : SQL is Query Language . SQL full form is Structured Query Language .

SQL is computer language for storing , manipulating , and retrieving data stored in relational database .

Que 13. Write SQL Commands ?

Ans : There are 4 commands for SQL .

1. DDL - Data definition Language

    A. Create – To create new table , a view of a table , or other object n database .

B. Alter – To modifies an existing database object , such as a table .
C. Drop – To delete a entire table , a view of a table or other object in database

2. DML - Data Manipulation Language

A. Insert – To create record
B. Update – To Modifies records
C. Delete – To delete records

3. DCL - Data Control Language

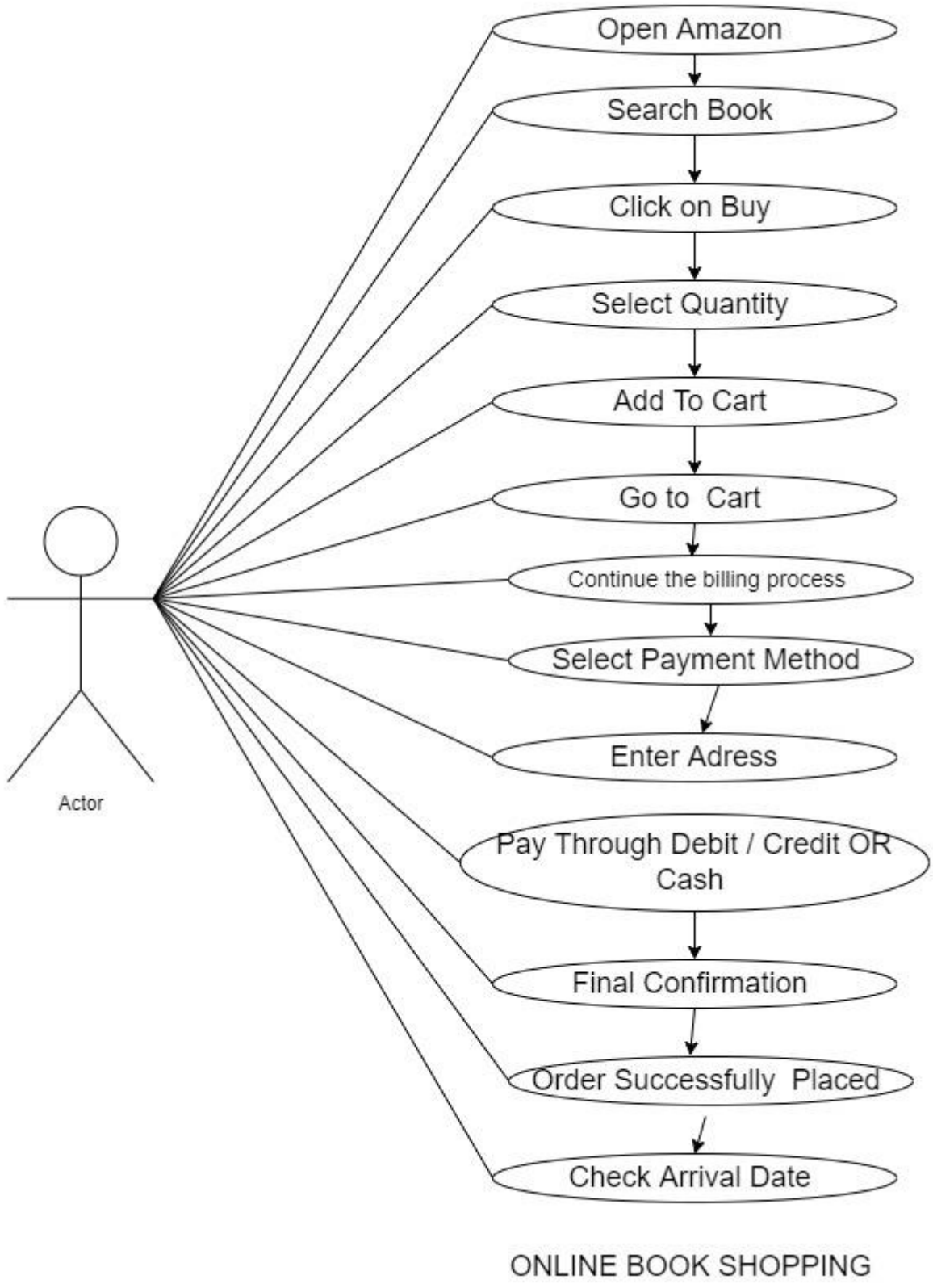
A. Grant – It Gives privilege to user
B. Revoke – To take back privilege granted from user

4. DQL - Data Query Language

A. Select – To retrieve certain records from one or more tables

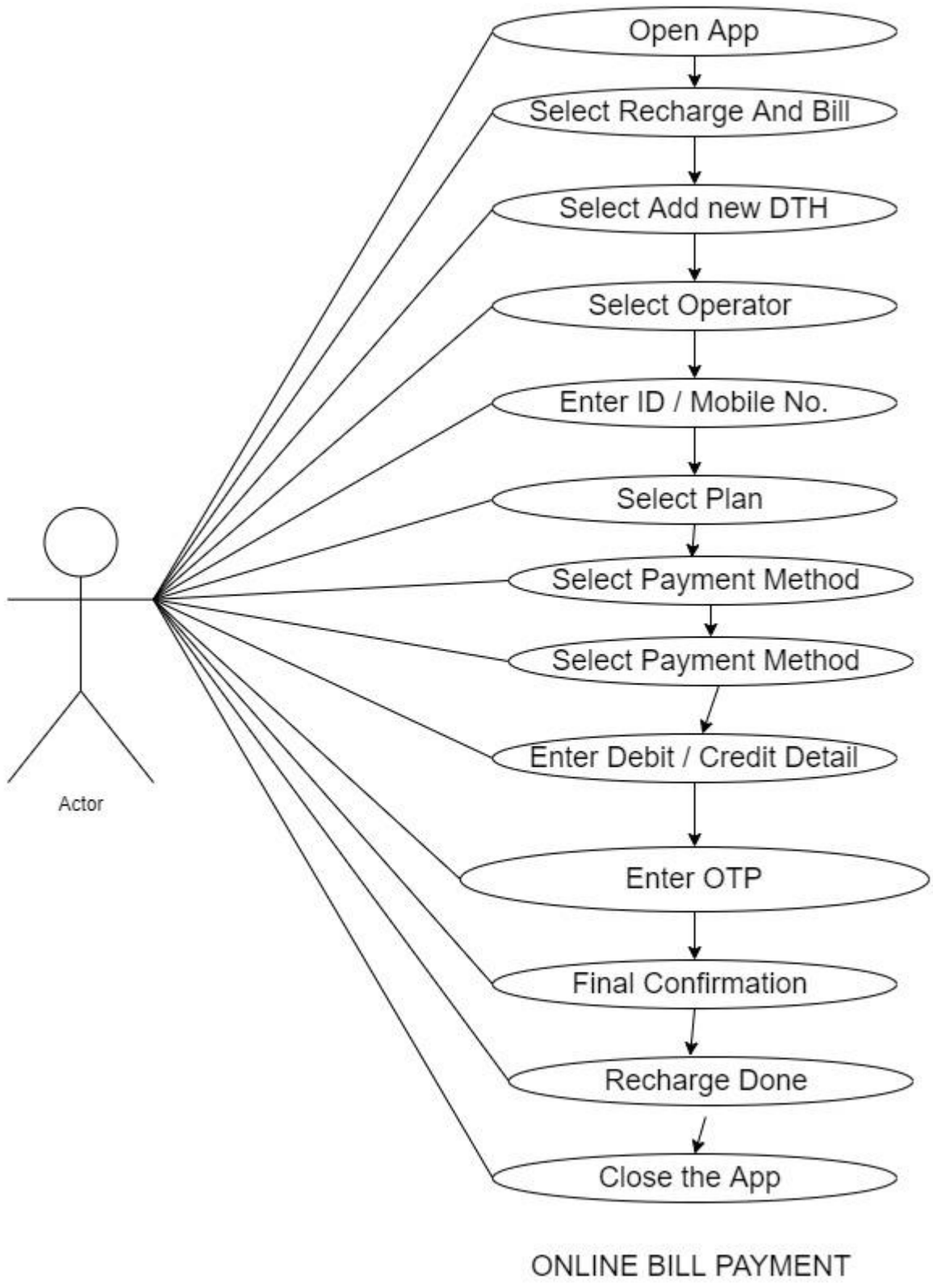
Que 14. Draw use case on online book shopping ?

Ans :



Que 15. Draw use case on online bill payment system ?

Ans :



Que 16. Write SDLC phases with basic information ?

Ans : There are six phases .

1. Requirement Gathering : In this phase the main aim is to established and understand the actual need of the customer and also provide them proper ideas .
   There Are two types of requirements .
   A. Functional Requirements : Describes system services or functions .
   B. Non Function Requirements : are constrains on the system or the development process .

2. Analysis : The analysis phase defines the requirements of the systems , independent of how these requirements will be accomplished .
   This phase defines the problem that the customer is trying to solve .
   This analysis represents WHAT phase .
   The deliverable result in the end of this phase is a requirement document .

3. Design Phase : This phase represents HOW phase .
   In this phase analysis team has provided the required documents and decides how to meet the customer's requirements .

4. Implementation Phase : In Implementation Phase , the team buikds the components either from scratch or by composition .
   Given the architecture documents from the design phase and the requirement document from the analysis phase , the team should build exactly what has been required , though there is steel roo m for innovation and flexibility .

5. Testing Phase : In this Completeness , correctness and software quality is checked .

   Testing is very important phase because company can deliver software of less functionality but the quality wise they met desire results .

   Only the testing phase work with every phases of the SDLC .

6. Maintenance Phase :
   Software maintenance is one of the activities in software engineering , and is the process of enhancing and optimizing deployed software as well as fixing defects .

Que 17. Write phases of waterfall Model ?

Ans : There are main Six phases of waterfall model that we discussed in QUE.16

1. Requirement Gathering
2. Analysis
3. Design
4. Implementation
5. Testing
6. Maintenance

Que 18. Write phases of Spiral Model ?

Ans : Boheam's Spiral Model

There are 4 phases of spiral model .

1. Planning : Determination of objectives , alternatives and constrains .
2. Risk Analysis : Analysis of alternatives and identification of risk . GO / NOT GO DECISION
3. Engineering : Development of next level product .
4. Customer Evolution : Assesment of the results of engineering .

Que 18. Write agile manifesto principle ?

Ans : There are 4 Principles .

1. Individual And Interaction : 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 requirements , instead of just depending on documentation .

3. Customer collaboration : As the requirements cannot be gathered completely in beginning of the project due to various factors , continuously customer interaction is very important to get proper product requirements .
4. Responding to change : Agile development is focused on quick responses to change and continuous development .

Que 19. What is joins ?

Ans : JOIN is an SQL clause used to query and access data from multiple tables, based on logical relationships between those tables .

Que 20. Write types of joins ?

Ans : There are 4 types of joins .

1. Inner join : Creates a new result table by combining column values of two tables based upon the join-predicate . The query compares each row of table 1 with table 2 to find all pairs of rows which satisfy the join predicate . When the join predicate is satisfied , column values for each matched pair of rows of A and B are combined into result row .

2. Left Join : The SQL LEFT JOIN returns all rows from the left table, even if there are no matches in the right table.
   This means that a left join returns all the values from the left table, plus matched values from the right table or NULL in case of no matching join predicate.

3. Right Joint : The SQL Right joint returns all rows from right table , even if there are no matches in the left table .
   This mans that right join returns all the values from the right table , plus matched values from the right table or NULL in case of no matching join predicate .

4. Full Join : The SQL FULL JOIN combines the results of both left and right outer joins.The joined table will contain all records from both tables, and fill in NULLs for missing matches on either side.

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

Ans : **Agile Methodology** :

- Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product.
- 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 stackholder .

Pros :

- It is very realistic approach to software developments
- Promotes team work and cross training .
- Functionality can be developed rapidly .
- 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 .

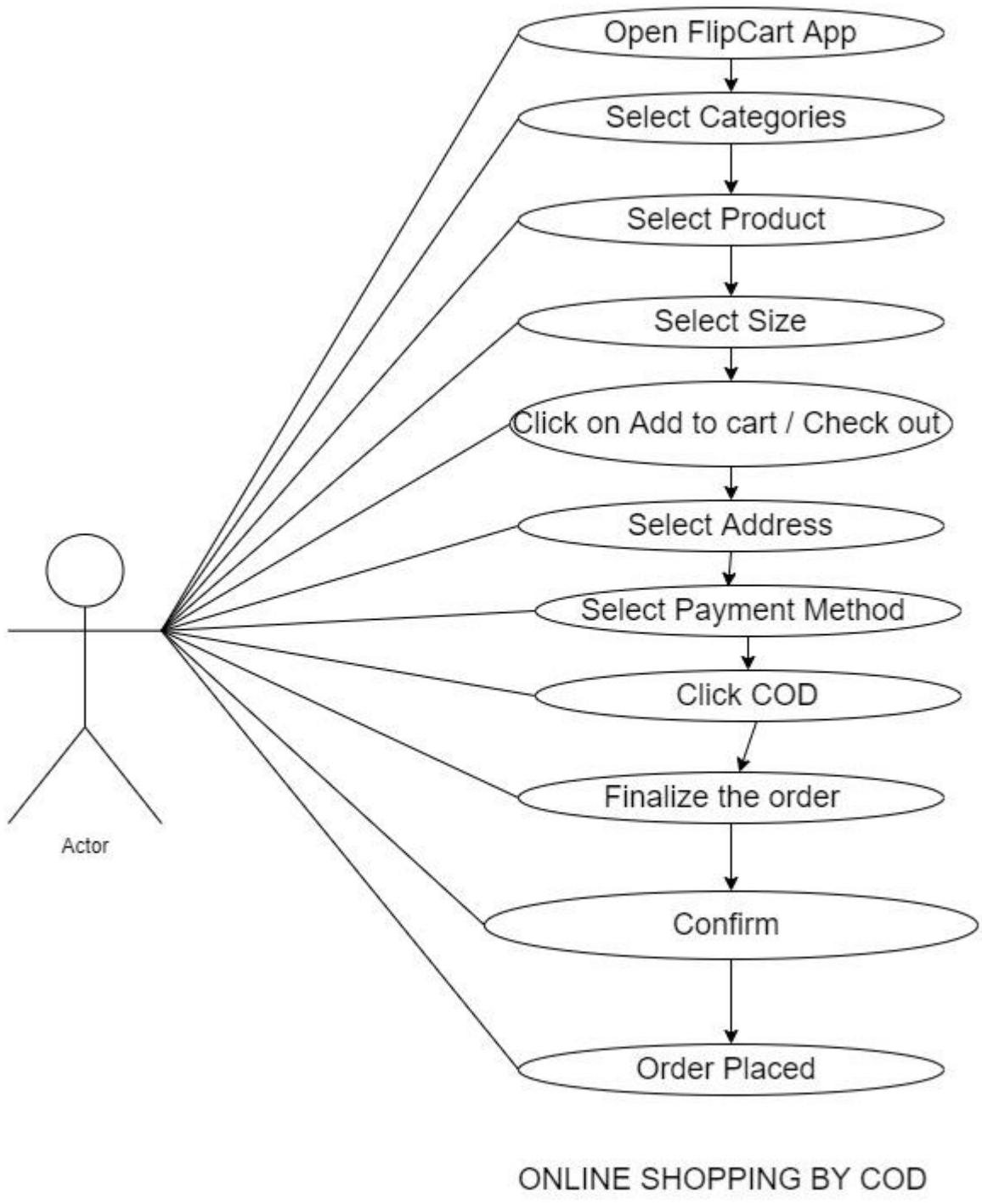
Cons :

- 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.

Que 23. Draw use case on online shopping product using COD .

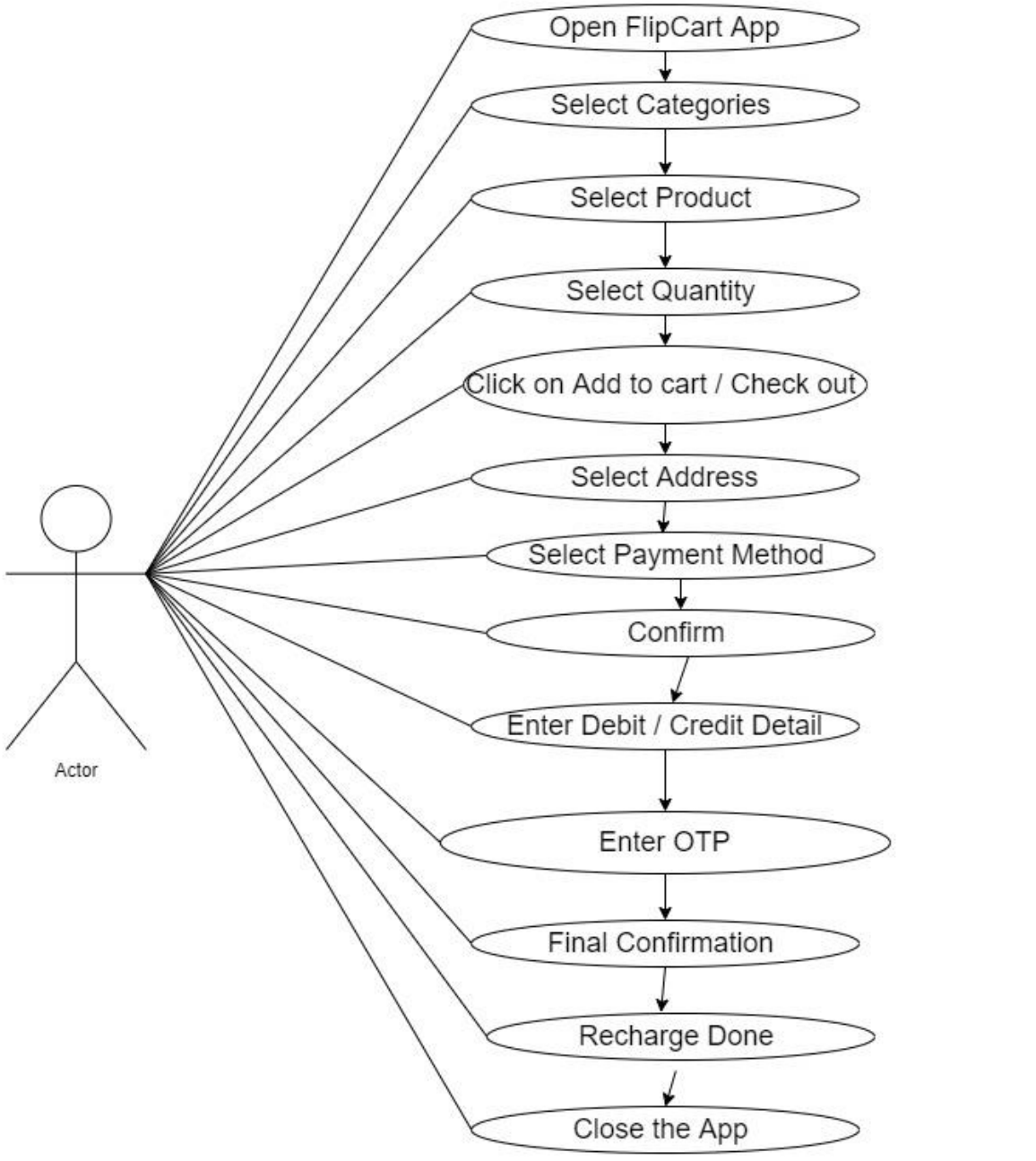
Ans :



ONLINE SHOPPING BY COD

Que 24. Draw use case on online shopping product using Payment gateway .

Ans :



ONLINE PRODUCT SHOPPING ON PAYMENT GATEWAY