ASSIGNMENT 1:

MODULE-1

Que:1- What is SDLC?

- **Its stand for SOFTWARE DEVELOPMENT LIFE CYCLE.**
- **It is essentially a series of steps, or phases that provide a model for the development and lifecycle management of anapplication or piece of software.**
- **It is structured process that enables the production of high-quality, low-cost software, in the Shortest Possible Production Time.**
- **The goal of SDLC is to produce superior software that meets& gets all customer expectations & demands.**

Que:2- What is software testing?

- **Testing is the process of evaluating a system or its components with the intent to find that whether it satisfiesthe specified requirement 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.**
- **According to ANSI/IEEE $_{1059}$ Standard, Testing can be defined as A process of analysing a software item to detect the differences between existing and required conditions (that is defects/errors/bugs) and to evaluate the features ofthe software item.**

- **Software Testing is a process used to identify the correctness, completeness, and quality of developedcomputer software.**

Que:3 - What is 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.**

- **It is break the product into small incremental builds**

- **It involves constant collaboration with stakeholders andcontinuous improvement at every stage.**

- **Once the work begins, teams cycle through a process of planning, requirements analysis, design, coding, unit testing, and acceptance testing.**

Que:4 - What is SRS?

- **It stands for Software Requirement Specification.**

- **It is a complete description of the behavior of the system to be developed.**

- **SRS contains use case diagram that describes all the interaction user wills have with the software application.**

- **FRS, BRS, FRD.**

Que:5 - What is oops?

- **oops Identifying objects and assigning , responsibilities to objects.**
- **oops has a web of interacting objects**
- **Objects are like a black box where data are hidden.**

Que:6 - Write Basic Concepts of oops.

- **Class**
- **Object**
- **Inheritance**
- **Polymorphism**
    - **Over ridding**
    - **Over loading**
- **Encapsulation**
- **Abstraction**

Que:7 - What is Object?

- **An object represents an individual, identifiable item, unit, or entity, either real or abstract, with a well-defined role in the problem domain.**

Que:8 - What is Class?

- **It is a blueprint for an object.**

Que:9 - What is encapsulation?

- **The process of wrapping the data in a single unit.**
- **To secure the data from outside world.**

Que:10 - What is inheritance?

- **Making a class from an existing class.**
- **Deriving the attribute of some other.**
- **ADV- Redundancy, Extensibility**

Que:11 - What is polymorphism?

- **One name Multiple form.**
    - **Over ridding - Same name of function with sameparameter but definition will be different.**

- **Over loading - Function overloading: same functionname but different parameter.**

Que:14 - Write SDLC phases with basic introduction -

- **There are seven type of SDLC phases –**

  - **Requirements collection/gathering: What is theproblem?**
    - **Customer Needs**
    - **Requirement from stake holder, client, customer,CEO, etc.**
    - **Improvement in current software.**
  - **Planning/Analysis: What we want?**
    - **Risk of the project**
    - **Cost of the project**
    - **Time for completion**
  - **Design: How can we get what we want?**
    - **Design Architecture Document**
    - **Implementation Plan**
    - **Critical Priority Analysis**

- **Performance Analysis**
- **Test Plan**

- **Implementation: Create what we want?**
  - **In the Implementation phase, the team builds the components either from scratch or by composition.**
  - **Implementation – Code**
  - **Critical Error Removal**

- **Testing: did we get what we want?**
  - **We test the build to check for defect.**
  - **We report the defect and get it fixed.**
  - **We retest the build until it fulfils customerrequirement.**

- **Deployment:**
  - **PROJECT LIVE then it will become a product.**

- **Maintenance:**
  - **Corrective maintenance: identifying & repairingdefects**

- **Adaptive maintenance: adapting the existingsolution to the new platform**
- **Perfective maintenance: implementing the newrequirements.**

Que:15 - Explain Phases of the waterfall model –

- **Requirement collection/gathering**
- **Analysis/planning**
- **Design**
- **Implementation**
- **Testing**
- **Deployment**
- **Maintenance**

- **{ NOTE: All the phases of WATERFALL MODEL is same asSDLC phases. }**

Que:16 - Write phases of spiral model –

- **Four phases of Spiral model:**
  - **Planning- determination of objectives, alternatives &constraints.**

- **Risk analysis- Analysis of alternatives and identification/resolution of risks.**
- **Engineering- development of the "next level" product.**
- **Customer resolution- assessment of the result ofengineering.**

Que:18 - Explain working methodology of agile model and alsowrite prosand cons. –

- **It is a combination of iterative & incremental model.**
- **It divides the software into small incremental builds, this build are provided in iterations, that means the big projectare divided into small chunks(iterations).**
- **Each iteration is last about one to three weeks.**
- **Each iteration involves all the team members working simultaneously on areas like planning, requirements analysis, design, coding, unit testing and acceptance testing.**
- **At the end of the iteration the working product is displayedto the customer or the important stake holder and it is released in the market.**
- **After the release we check for the feedback of the deployedsoftware.**
- **If any enhancements is needed in the project than it's doneand it's re-released.**

- **ADVANTAGE -**

Frequent delivery.

Face to Face communication with the customer.

Less time.

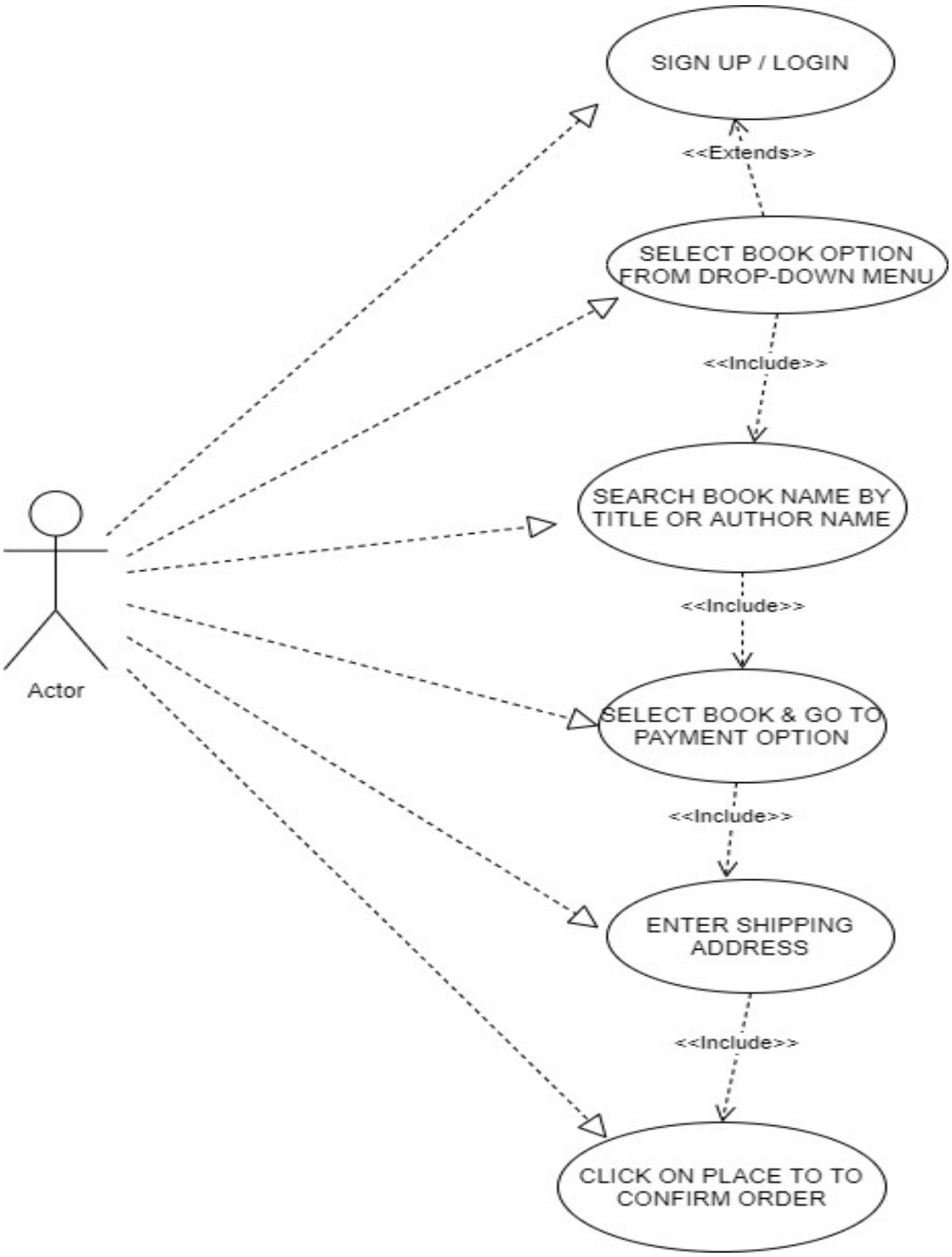
Adaptability.

- **DIS-ADVANTAGE –**

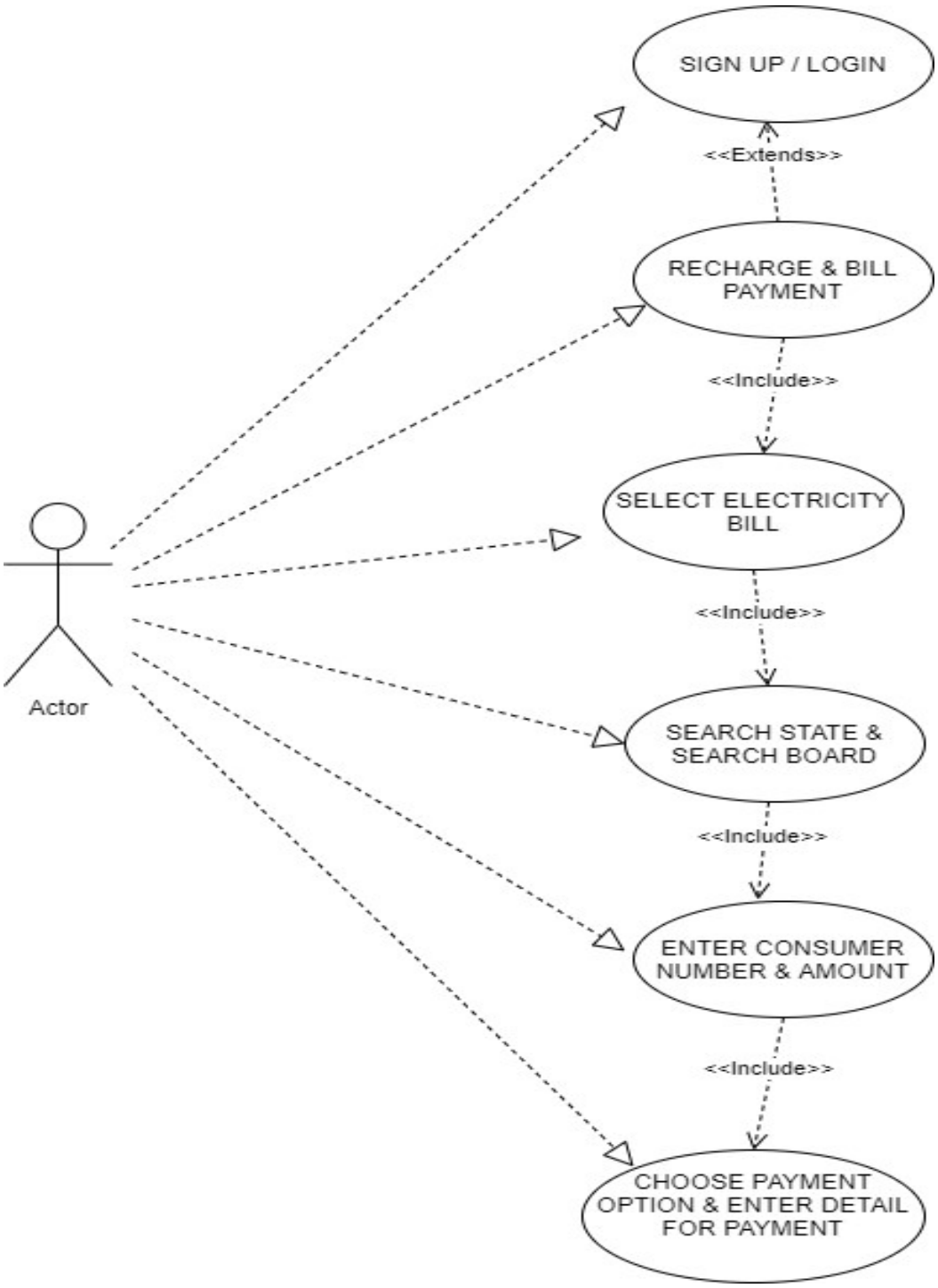
Less time.

Maintenance problem.

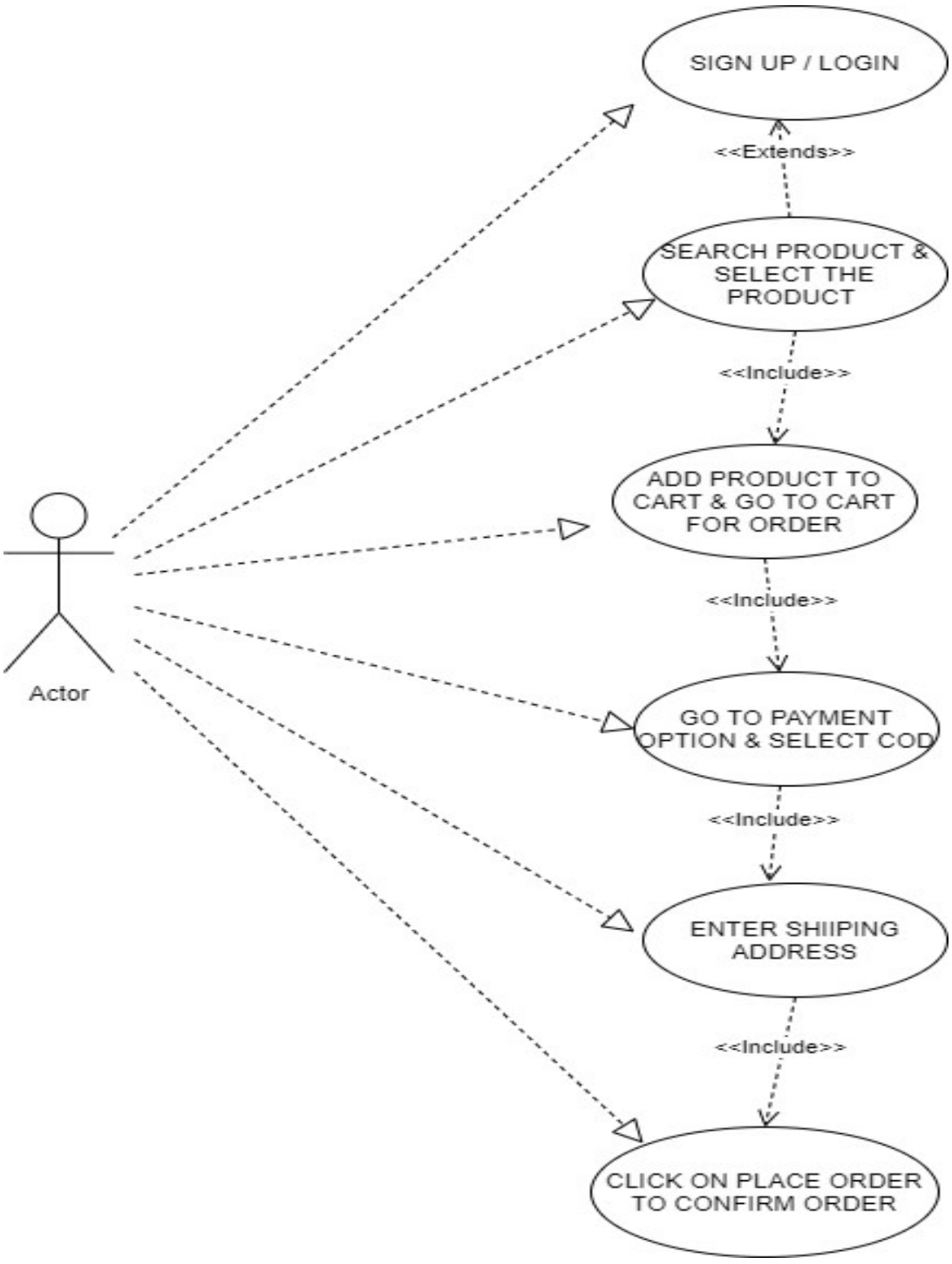
Que:12 - Draw Use case on Online book shopping.



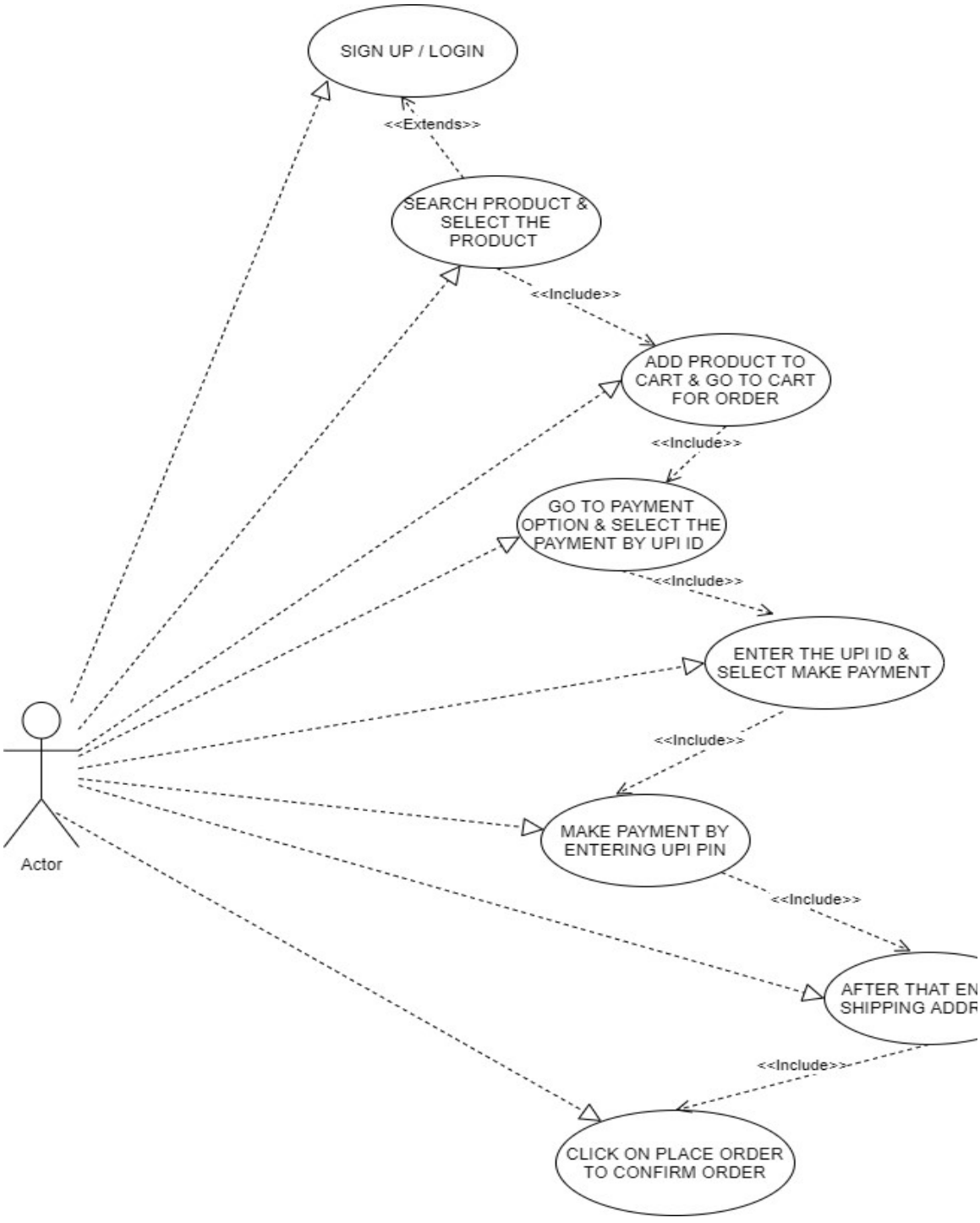
Que:13 - Draw Use case on online bill payment system (paytm).



Que:19 - Draw use case on Online shopping product using COD –



Que:20-- Draw use case on Online shopping product usingpayment gateway -


SIGN UP / LOGIN
<<Extends>>
SEARCH PRODUCT & SELECT THE PRODUCT
<<Include>>
ADD PRODUCT TO CART & GO TO CART FOR ORDER
<<Include>>
GO TO PAYMENT OPTION & SELECT THE PAYMENT BY UPI ID
<<Include>>
ENTER THE UPI ID & SELECT MAKE PAYMENT
<<Include>>
MAKE PAYMENT BY ENTERING UPI PIN
<<Include>>
AFTER THAT EN
SHIPPING ADDR
<<Include>>
CLICK ON PLACE ORDER TO CONFIRM ORDER
Actor