SOFTWARE TESTING ASSIGNMENT

Module-1

1) What is SDLC ?

- Basically SDLC means a life cycle of Software production. SDLC is step-by-step approach to make software with **HIGH QUALITY**, **LOWEST COST in SHORTEST POSSIBLE TIME** by defining the phases like **PLANNING, ANALYSIS AND DESIGN, CODING IMPLEMETATION, TESTING** and **MAINTENANCE.**

2) What is Software Testing ?

- Software testing is process to check the actual software product with expected requirements are fullfill or not, and check the completeness, correctness and quality of the actual software.

3) What is Agile Methodology ?

- Agile methodology is a one of the SDLC model. Agile methodology is based on Iterative and incremental model. Agile methodology is uses for process adaptability and customer satisfaction by rapid delivery of working software product.

4) What is SRS ?

- SRS means Software Requirement Specification, basically the SRS needs in SDLC's analysis Phase. It is the document of customer's detailed requirements about how the expected software perform. SRS is the structure of the required software for the software developer. It can also use for the testing purpose, where to make a difference between expected product and actual product.

5) What is OOPS ?

- Object oriented programming is a viewed as a collection of the object. It is used to structure the software program into simple reusable code. It is also known as functional testing or black box testing.

6) What is Object?

- An Object is the basic unit of OOPs which is accessed by its properties called data member & member fuctions (method) .It creates the memory for the class.

  (or)

  Object is an instant of class that execute the class. It takes up space like other variable in the memory.

7) What is class?

- Class is a collections of object. It does not take any space on memory. It is a blueprint or a template to describe the properties and behavior of the objects.

8) What is Encapsulation?

- Encapsulation is defined as the wrapping up of data under a single unit. It is the mechanism that binds together code and the data it manipulates. It hide/include private access at data member & member function.

9) What is Inheritance?

- Inheritance is a mechanism in which one class (super class) acquires or inherit the properties of another class (sub class). It is very important concept of the OOPs as it helps to reduce the code size.

  Examples: a child inherits the traits of his/her parents.

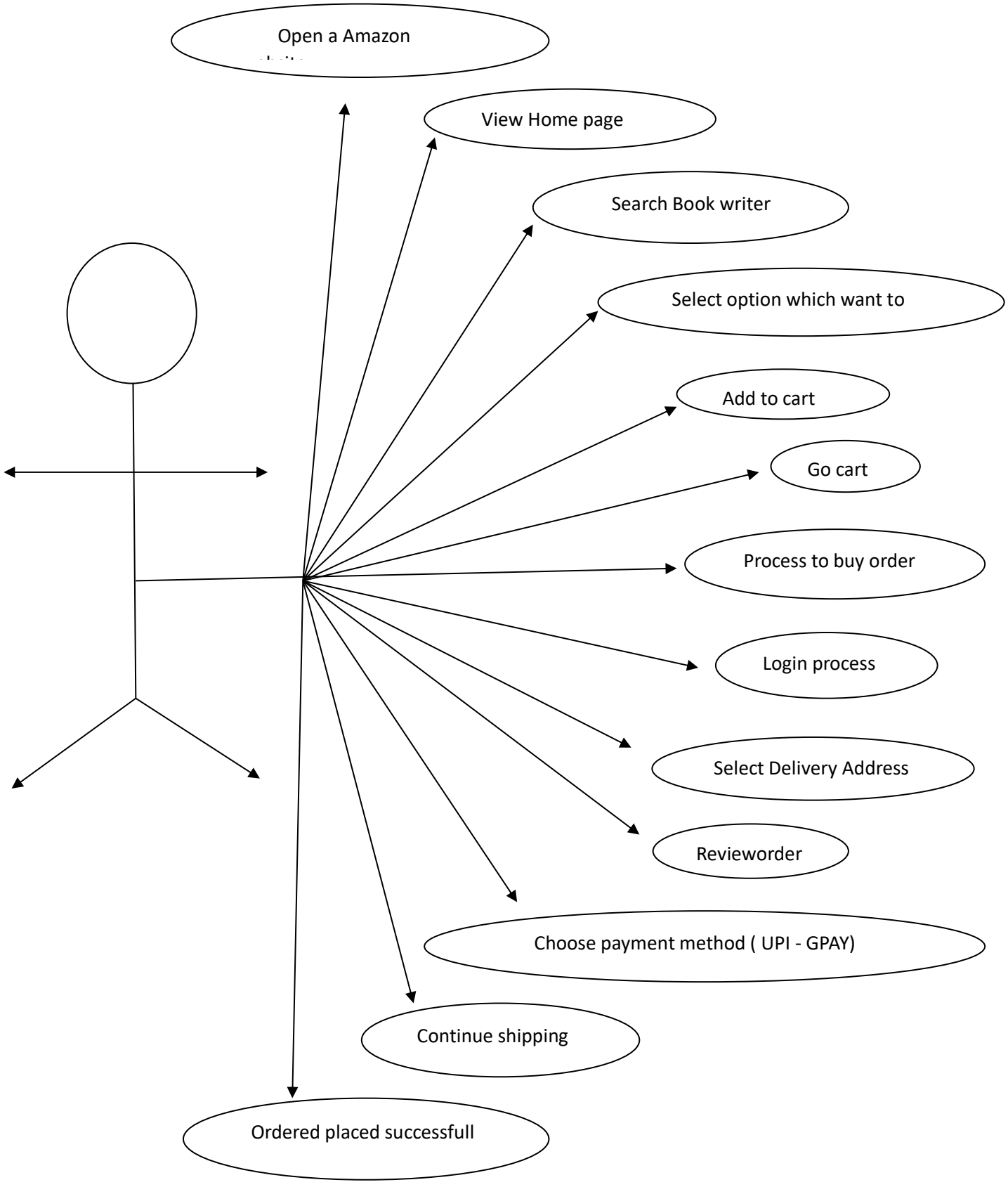
SOFTWARE TESTING ASSIGNMENT

Module-1

10) What is Polymorphism?

- The word “Poly” means many and “morphism” means forms i.e many forms. Basically, it is defined as a same objects having different behaviour.

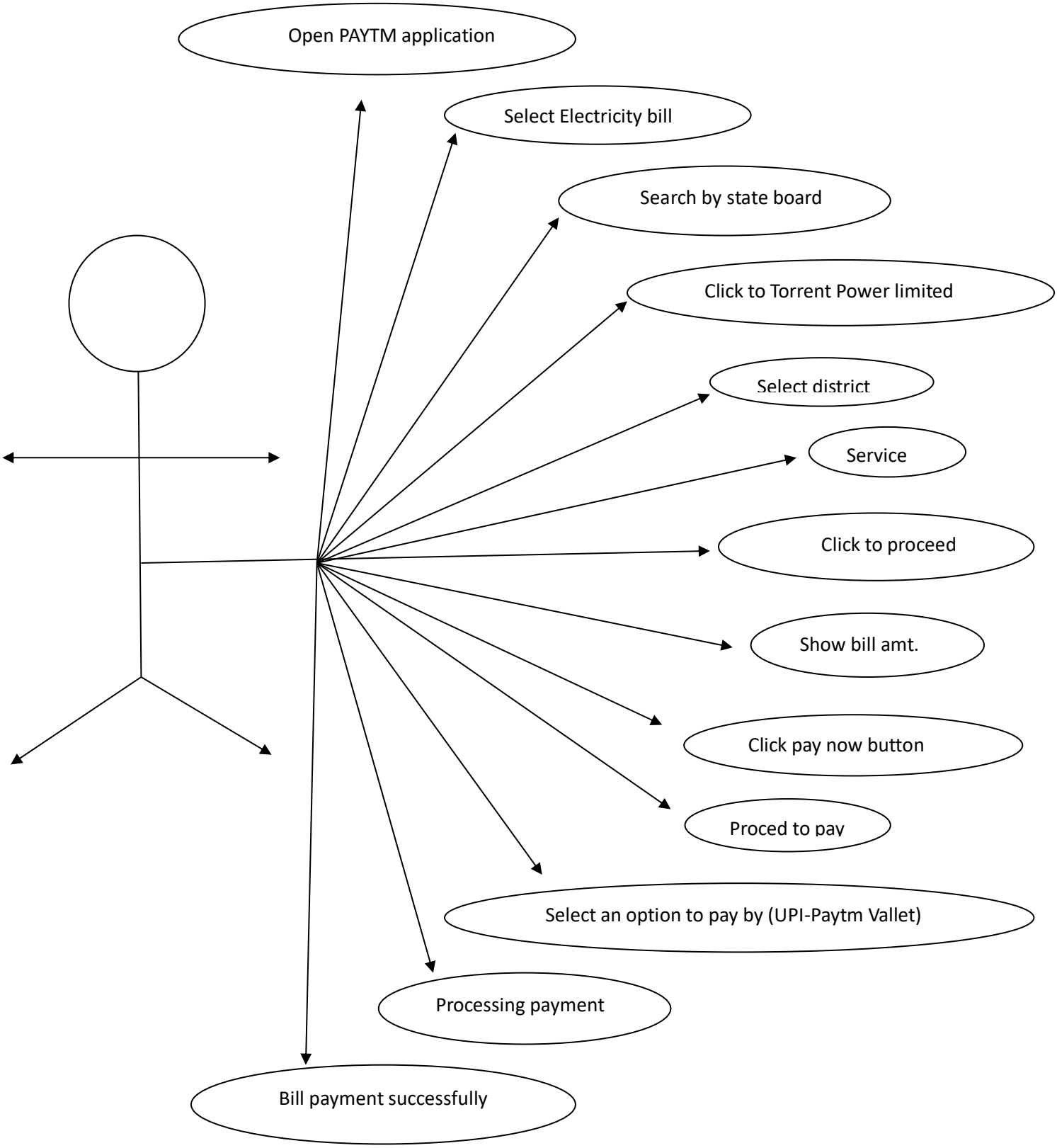
11) Draw Usecase on online book shopping.



SOFTWARE TESTING ASSIGNMENT

Module-1

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



SOFTWARE TESTING ASSIGNMENT

Module-1

13) Write SDLC phases with basic introduction?

- SDLC stands for " Software Development Lifecycle". It is a methodology or step-by-step approach to produce software with high quality, lowest cost in the shortest possible time by defining the phases like Requirement Collection, Software analysis, Design, Coding or Implementation. Testing and Maintenance.

Phases:

1.Reqirement Collection/ Gathering :- It is the initial phase of the SDLC development process wherein the development team interact or work closely with the customer to determine the customer requirements for the product.
Three types of problem arises at the time of Requirement collection are:
i) **Lackofclarity**: it is hard to write documents that are both precise and easy to read.
ii) **Requirement Confusion**: Functional and Non functional requirements tend to be intertwined.
iii)**Requirement Amalgamation**: Several different requirement may be expressed together.

2. Software Analysis :- The goals you achieve at this stage are identified as the system of function your business needs to develop and implement.The main purpose of this phase is to analyse the requirement and get the approval from the customer. One achieved this through Software Requirement Specification (SRS) which include all the requirements gathered and developed during the requirement gathering phase.

3. Software Design:- In this phase, the software design is created which include the overall architecture of the Software, data structure and interface. The main purpose of this phase is to transform all the customer requirement into complete detailed system designed specification.

4. Implementation phase :- This phase is the longest and one of the critical phase in the software development Lifecycle. The implementation phase deals with the issues of quality, performance, Baseline,libraries and debugging. During Implementation phase, the programming language and different frameworks come into use for the actual implementation of the product. The developers must follow predefined coding standards and guidelines as well as complete project modules within the defined deadline.

5. Testing phase:- The testing phase is a separate phase which is performed by a different team after the Implementation phase is complete . The main purpose of this phase is to test the Software throughly. The testing team receives the developed software, where software tester and Quality Analyst conduct various tests to detect defects. Upon finding any defect the testing team document and reports them to the development team for error removal. The testing team ensures that each components of the software is error free and work as expected.

6. Maintenance phase :- Software maintenance is one of the activities in software engineering , and is the process of enchancing and optimizing deployed software as well as fixing defects.
Maintenance is the process of changing a system after it has been deployed.
i) Corrective Maintenance : identifying and repairing defects
ii) Adaptive Maintenance : adapting the existing solution to the new platform.
iii) Perfective Maintenance : implementing the new requirement.

SOFTWARE TESTING ASSIGNMENT

Module-1

14) Write Agile Manifesto principles?

- Principle of Agile Manifesto are:-

i) The highest priority is to satisfy the customer through early and continuous delivery of valuable software.

ii) The project team welcomes changing requirement, even late in development.

iii) Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shortest timescale.

iv) Business people and developers must work together daily throughout the project.

v) The process builds projects around motivated individuals, giving them the environment and support they need, and trustthem to get the job done.

vi) A face-to-face conversation is the most efficient and effective method of conveying information toand within a development team.

vii) Working software is the most important measureof progress.

viii) Agile processes promote sustainable development. The sponsors , developers and users should maintain a constant pace indefinitely.

ix) Pay continuous attention to technical excellence and good design enhances agility.

x) Asimplicity is essential. This is the art of maximizing the amount of work not done.

xi) Self-organizing teams produce the best architectures, requirements and designs.

xii) At regular intervals, the team reflects on how to become 'more effective and adjusts its behavior accordingly.

15) Explain the phases of waterfall Model?

- The phases of Waterfall Model are:

i) Requirement Collections/ Gathering: In this phase, the requirementsare gathered from client for the development of software product.

ii) Analysis: The analysis phase also gathers business requirements and identifies any potiential risks.The goals you at this stage are identified as the system of functions your business needs or wants to developand implements.

iii) Design: This involves creating a detailed design document that outlines the software architecture, user interface and system components.

iv) Implementation: The implementation phase involves coding the software based on the design specifications. This phase also include unit testing to ensure that each compone-nts of the software is working as expected.

v) Testing: In this phase, the software is tested to ensure that it meetsthe requirements and expectations of the clients.

vi) Maintenance: The final phase involves deploying the software and maintaining it by fixing any issues or bugs that may arise.

16) Write the phases of spiral models?

- The phases of Spiral Models are:

i) Planning: In this phase, the scope of the project is determined, and a plan is created for the next iteration of the spiral.

ii) Risk Analysis: The risk associated with the project are identified and evaluated.

iii) Engineering: The software is developed based on the requirement gathered int the iteration.

iv) Customer Evaluation: The software is evaluated to determine if it meets the customer's requirements and if it is of high quality.

SOFTWARE TESTING ASSIGNMENT

Module-1

17) Write agile manifesto principles?

- 1) Our high priority is to satisfy the customer through early and continous deliver of valuable software
- 2) welcome changing requirements even late in development. Agile processes harness change for the customer's competitive advantages.
- 3) Deliver working software frequently , from a couples of weeks to a couple of month, with a preference to the shorter timescale.
- 4) Businesspeople and developers must work together daily throughout the project.
- 5) Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- 6) The most efficient and effective method of conveying information to and within a development team is face to face conversation
- 7) Working software is the primary measure of progress.
- 8) Agile process promote sustainable development. The sponsers, developers and users should be able to maintain a constant pace indefinitely.
- 9) Continuous attention to technical excellence and good design enhances agility.
- 10) Simplicity- the art of maximizing the amount of work not done – is essential.
- 11) The best architectures, requirements and design emerge from self organizing teams.
- 12) At regular intervals, the team reflects on how to become more effective, then turns and adjusts its behavior accordingly.

18) Explain working methodology of Agile Model and also write pros and cons?

- Agile SDLC model is a combination of iterstion and incremental process models with Focus on the process adaptibility and customer satisfaction by rapid delivery of working Software products.

*** Pros.of Agile models**

i) Rapid delivery
ii) Very realistic approach
iii) Functionality can be developed easily
iv) Resources requirement are minimum
v) Suitable for fixed or changing requirement
vi) Gives flexibility to developers
vii) Promote team work and cross training
viii) Little or no planning required

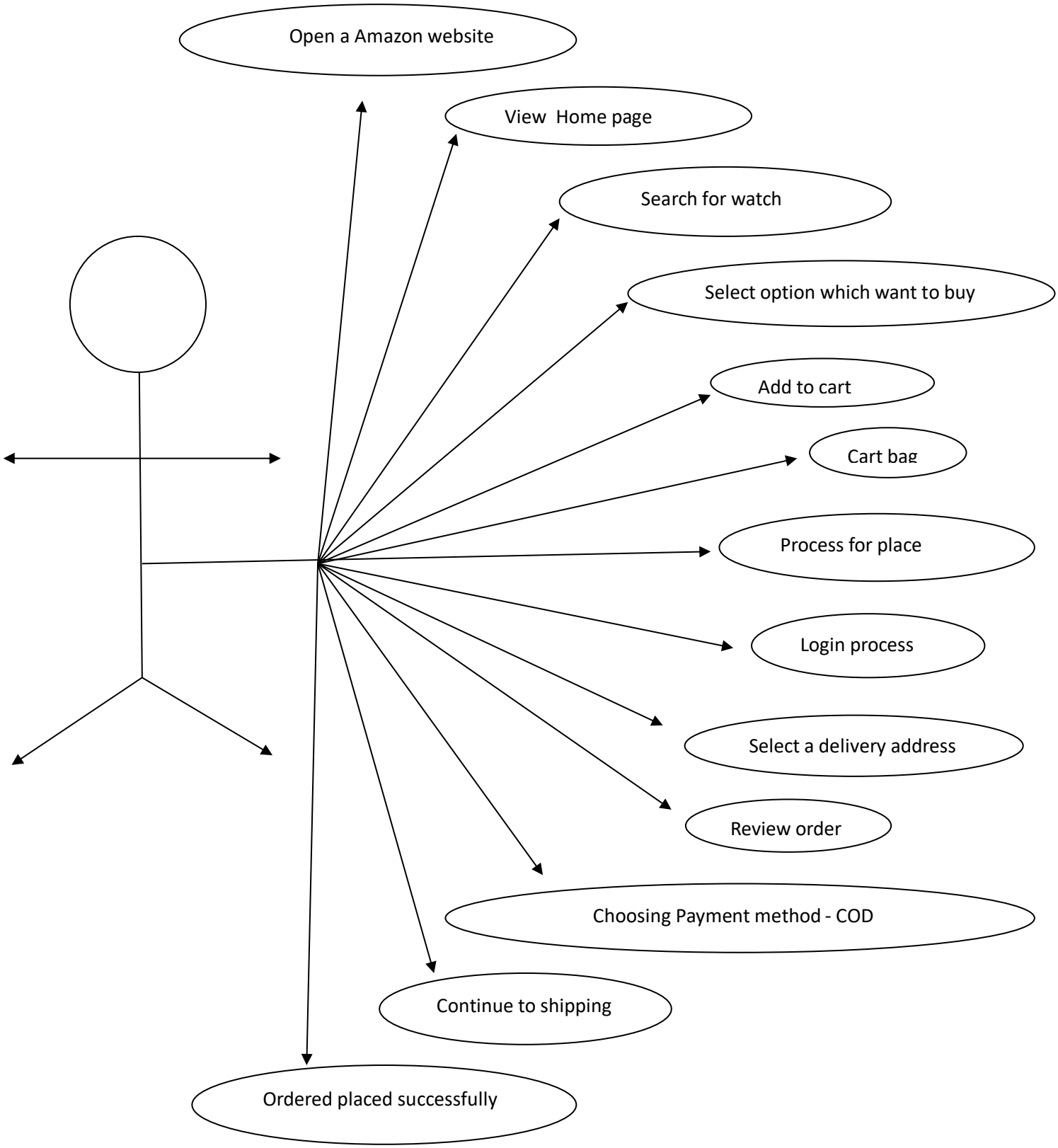
*** Cons. of Agile Model**

i) More risk of sustainability, maintainability and extensibility.
ii) Depend heavily on customers requirement
iii) Very high individual dependency
iv) Minimum documentation generated
v) Not useful for smaller projects
vi) Not suitable for handling complex dependencies

SOFTWARE TESTING ASSIGNMENT

Module-1

19) Draw Usecase on online shopping product using COD.



SOFTWARE TESTING ASSIGNMENT

Module-1

20) DRAW USE CASE ON ONLINE SHOPPING PRODUCT USING PAYMENT GATEWAY.