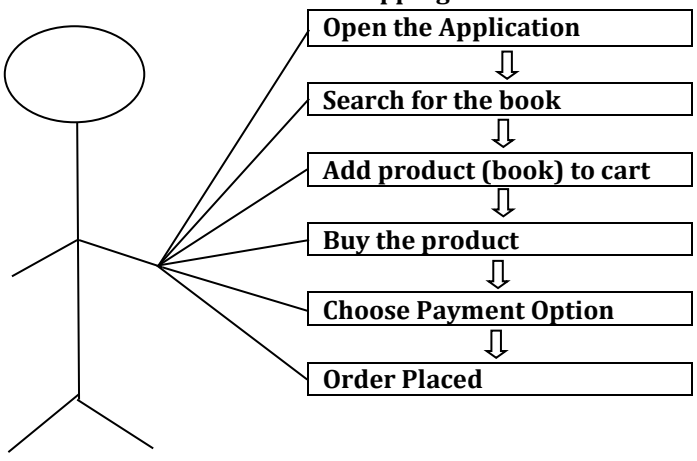
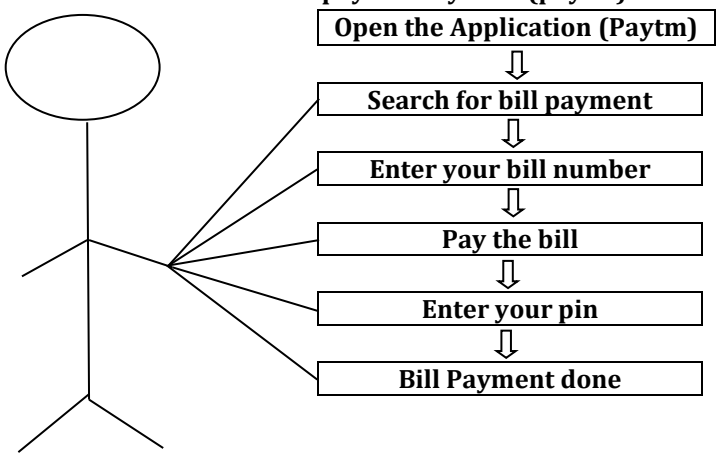
Software Testing Assignment

Module 1 (Fundamental)

1. **What is SDLC?**
   Software Development Life Cycle (SDLC) is a process used by software industry to design, develop and test high quality softwares.
   It defines the process of planning, implementation, testing, documentation, deployment, ongoing maintenance and support.
2. **What is Software Testing?**
   It is a process. The process used to identify the completeness, correctness and quality of developed computer software.
3. **What is Agile Methodology?**
   Agile model is a combination of Iterative and Incremental model with focus of process adaptability and customer satisfaction by rapid delivery of working software product.
4. **What is SRS?**
   Software Requirement Specification (SRS) is a document that describes what the software will do and how it will be expected to perform.
5. **What is oops?**
   Object Oriented Programming System (OOPS) is identifying object and assigning responsibilities to this object.
   Object communicate each other by sending messages.
   Messages are received by the method of an object
6. **Write basic concepts of oops?**
   There are mainly 6 concepts of OOPS
   - Object
   - Class
   - Encapsulation
   - Inheritance
   - Polymorphism
   - Abstraction
7. **What is object?**
   It is an instance of a class to create memory of that class, to access the whole properties of a class except private.
8. **What is class?**
   It is a collection of data member (variable) and member function (process, methods) with its behaviour.
9. **What is encapsulation?**
   It is data hiding, wrapping up of data into single unit.
10. **What is inheritance?**
    It means that one class inherits the characteristic of another class.
11. **What is polymorphism?**
    It describes a situation in which something occurs in several different forms.
12. **Draw use case of Online book shopping**



13. **Draw use case of online bill payment system (paytm)**



14. **Write SDLC with basic introduction**

Software Development Life Cycle (SDLC) is a process used by software industry to design, develop and test high quality softwares. It defines the process of planning, implementation, testing, documentation, deployment, ongoing maintenance and support.

It has 6 phases

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

15. **Explain phases of Waterfall model**

There are 6 phases

1. Requirement Gathering – The main aim of this phase is to understand the exact requirement of the customer and documented them properly. Three type of problem can arise in this lack of clarity, requirement confusion, and requirement amalgamation.
2. Analysis – The analysis phase defines the requirements of the system and independent of how this requirements should be accomplished.
3. Design – Design Phase helps in specifying hardware and system requirements and helps is overall system architecture.
4. Implementation – The system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.
5. Testing – All the units developed in the implementation phase are integrated into a system after testing each unit.
6. Maintenance – Maintenance phase is performed by every user once the software has been delivered to the customer.

16. **Write phases of spiral model**

There are 4 phases in spiral model

1. Planning – Determination of objectives, alternatives and constraints
2. Risk Analysis – Analysis of Identification and Alternatives, Resolution of risks
3. Engineering – Development of the next level product.
4. Customer Evaluation – Assessment of the results of Engineering

17. **Write agile manifesto principle**

Agile has 4 manifesto principle

1. Individuals and interactions over processes and tools
2. Working software over comprehensive documentation
3. Customer collaboration over contract negotiation
4. Responding to change over following a plan.

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

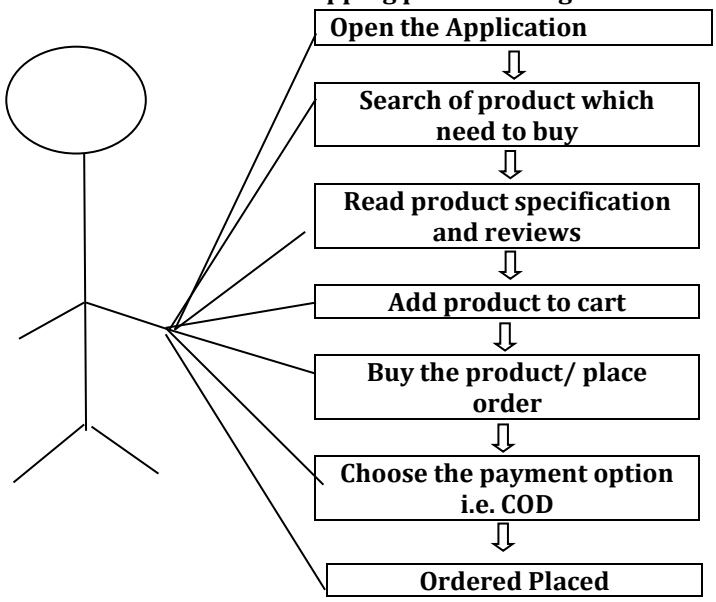
Pros

- It is very realistic approach to software development
- Resources requirements are minimum
- Promotes Team work

Cons

- Not suitable for handling complex dependencies
- More risk of sustainability, maintainability and extensibility

19. Draw use case on Online shopping product using COD.



20. Draw use case on Online shopping product using payment gateway.