Software Testing Assignment

Module–1(Fundamental)

1. What is SDLC

ANS: SDLC is a structure imposed on the development of a software product that defines the process for planning, implementation, testing, documentation, deployment, and ongoing

maintenance and support.

2. What is software testing?

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

3. What is agile methodology?

ANS: 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.

4. What is SRS

ANS: 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. What is oops

ANS: Identifying objects and assigning responsibilities to these objects.

Objects communicate to other objects by sending messages.

Messages are received by the methods of an object.

6. Write Basic Concepts of oops

ANS: - Object

Class

Encapsulation

Inheritance

Polymorphism: (overriding, overloading)

Abstraction

7. What is object

ANS: An object represents an individual, identifiable item, unit, or entity, either real or abstract,

with a well-defined role in the problem domain.

An "object" is anything to which a concept applies. This is the basic unit of object oriented programming (OOP).

8. What is class

ANS: A class represents an abstraction of the object and abstracts the properties and behaviour of that object.

9. What is encapsulation

ANS: Encapsulation is the practice of including in an object everything it needs hidden from other objects. The internal state is usually not accessible by other objects.

Encapsulation in Java is the process of wrapping up of data (properties) and behavior (methods) of an object into a single unit; and the unit here is a Class (or interface).

10. What is inheritance

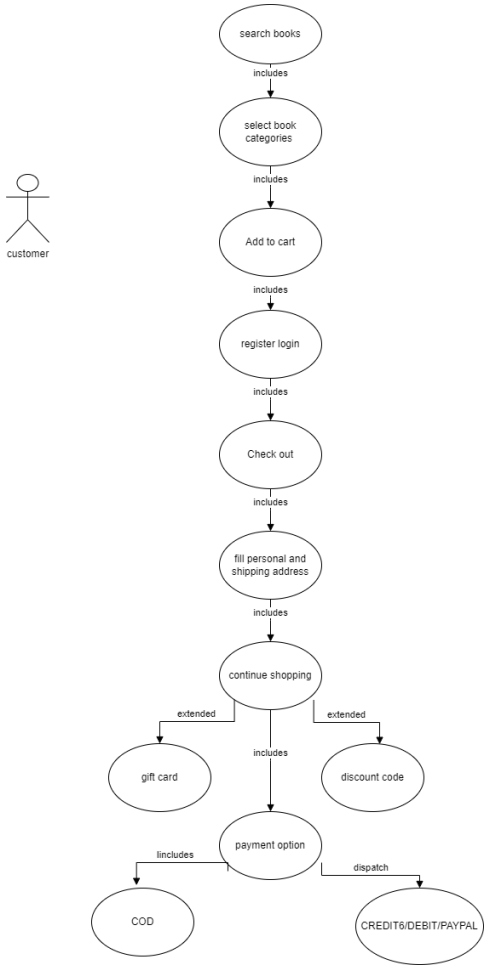
ANS: Inheritance in Java is a mechanism in which one object acquires all the properties and behaviours of a parent object.

11. What is polymorphism

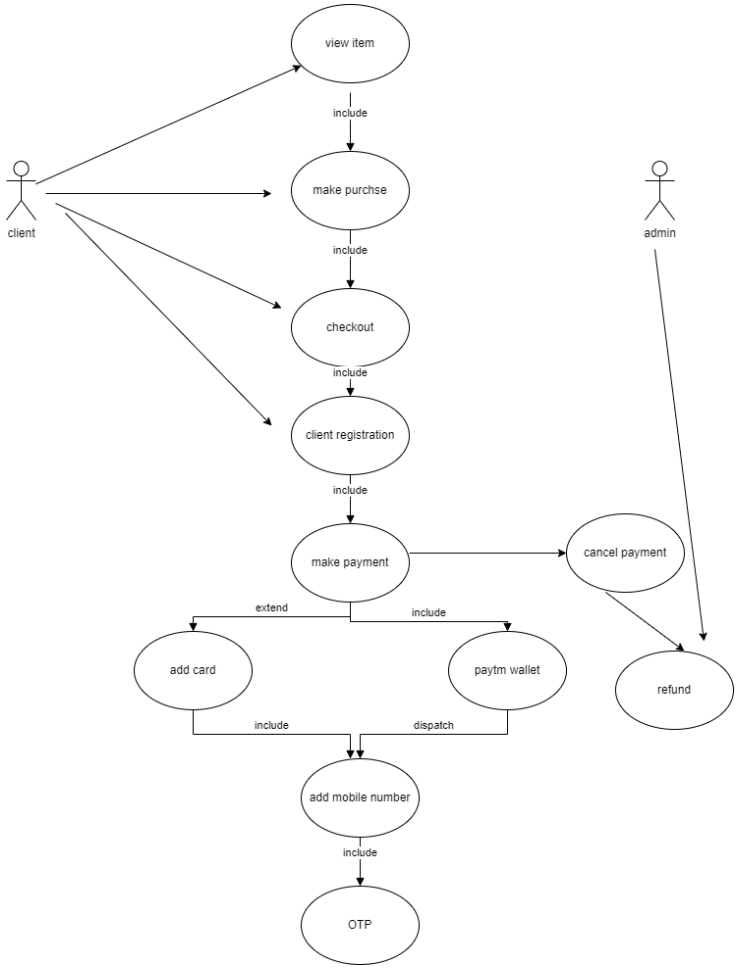
ANS: Polymorphism means “having many forms”. It allows different objects to respond to the same message in different ways, the response specific to the type of the object.

12. Draw Use case on Online book shopping

ANS:



13. Draw Use case on online bill payment system (Paytm)



ANS:

14. Write SDLC phases with basic introduction

ANS: Requirements Collection/Gathering: Establish Customer Needs

Analysis: Model and Specify the requirements- “What”

Design: Model and Specify a Solution – “Why”

Implementation: Construct a Solution in Software

Testing: Validate the solution against the requirements

Maintenance: Repair defects and adapt the solution to the new requirements

Introduction: SDLC is a structure imposed on the development of a software product that defines the process for planning, implementation, testing, documentation, deployment, and ongoing maintenance and support. There are a number of different development models.

15. Explain Phases of the waterfall model

ANS: the classical software lifecycle models the software development as a step by step "waterfall" between the various development phase:

Requirements Collection

Analysis

Design

Implementation

Testing

Maintenance

16. Write phases of spiral model

ANS: Planning: determination of objectives, alternatives, and constraints.

Risk analysis: analysis of alternatives and identification/resolution of risks.

Customer evaluation: assessment of the results of engineering.

Engineering: development of the "next level" product.

17. Write agile manifesto principles

ANS: Individuals and interactions - in agile development, self-organization and motivation are important, as are interactions like co-location and pair programming.

Working software - Demo working software is considered the best means of communication with the customer to understand their requirement, instead of just depending on documentation.

Customer collaboration - As the requirements cannot be gathered completely in the beginning of the project due to various factors, continuous customer interaction is very important to get proper product requirements.

Responding to change - agile development is focused on quick responses to change and continuous development.

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

ANS: 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.

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

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.

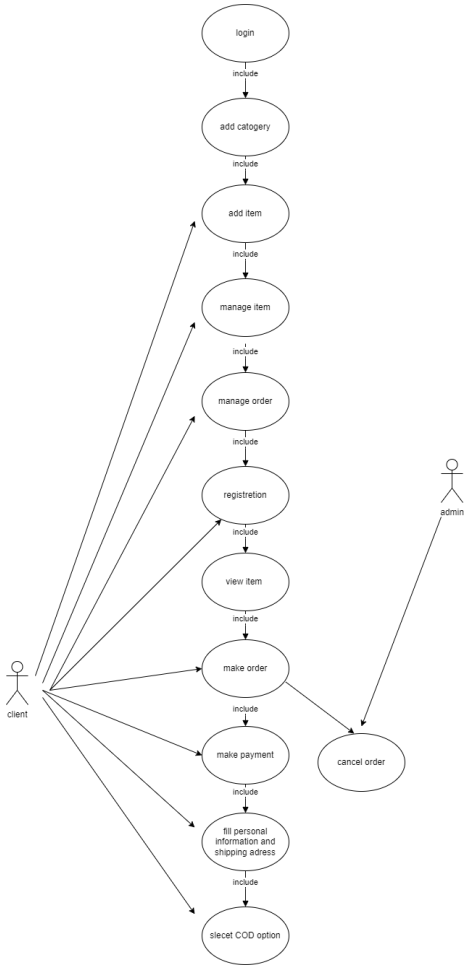
Strict delivery management dictates the scope, functionality to be delivered, and adjustments to meet the deadlines.

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.

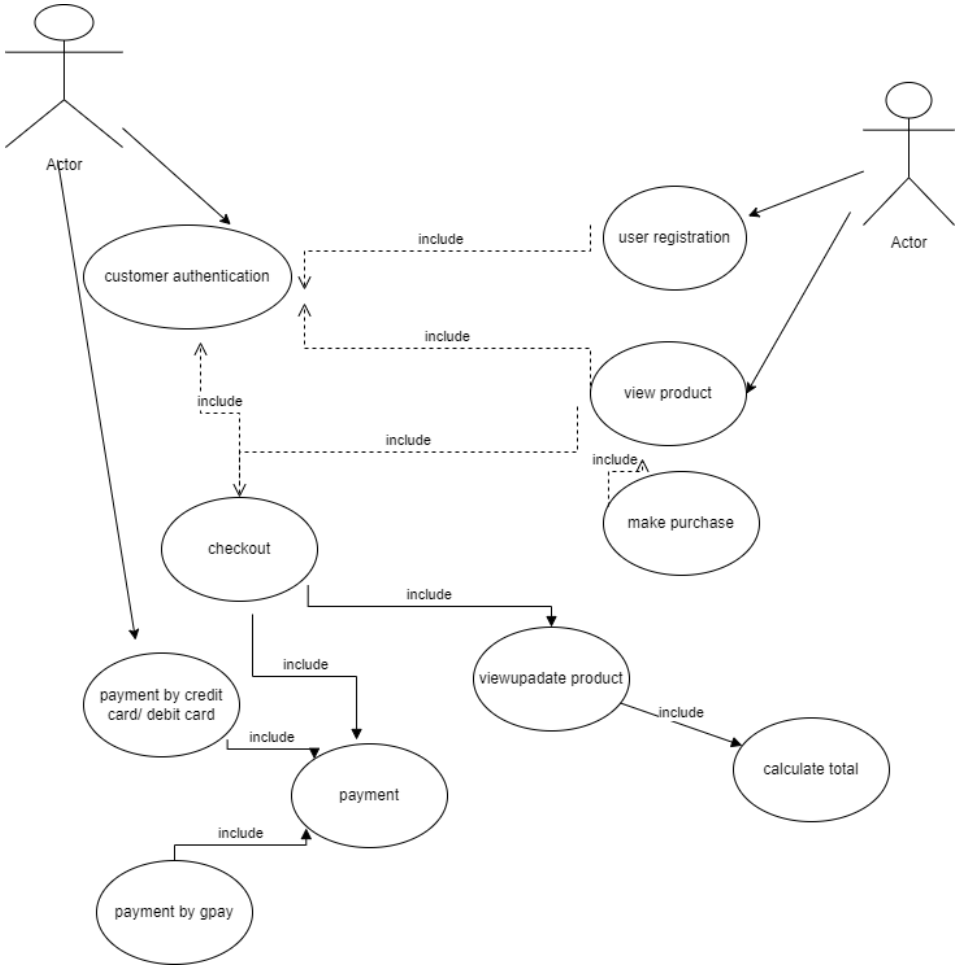
Transfer of technology to new team members may be quite challenging due to lack of

19. Draw usecase on Online shopping product using COD.



ANS:

20. Draw usecase on Online shopping product using payment gateway.


Actor
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user registration
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make purchase
checkout
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