Software Testing Assignment

Module-1(Fundamental)

- What is SDLC

  SDLC - Software development life cycle
  SDLC is a step by step process to develop a software or an application.
  It has several phases, such as
  - Requirement collection
  - Requirement Analysis
  - Design
  - Implementation
  - Testing
  - Maintenance

- What is Software Testing?

  Software Testing is a part of SDLC.
  It's a process of evaluating a system or its components with intent to find out whether it satisfies the specified requirements or not.

- What is agile methodology?

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

- What is SRS
  Software requirement specification
  SRS is a complete description of the behavior of the system to be developed.

- What is OOPS
  Object oriented languages.
  Identifying objects and assigning responsibilities to these objects.

- Write basic concepts of OOPS
  1. Object
  2. Class
  3. Encapsulation
  4. Inheritance

5. polymorphism
   -overriding
   -overloading
6. abstraction

- What is object
  An object is the basic unit of OOP which is accessed by its properties called data member & member function. It creates the memory for the class.

- What is class
  Class is a collection of data member (variables) and member function with its behavior. Class is a blueprint or a template to describe the properties and behavior of the objects.

- What is encapsulation
  A wrapping up of data and functions into a single unit is called encapsulation. It hide/include private access of data member & member function.

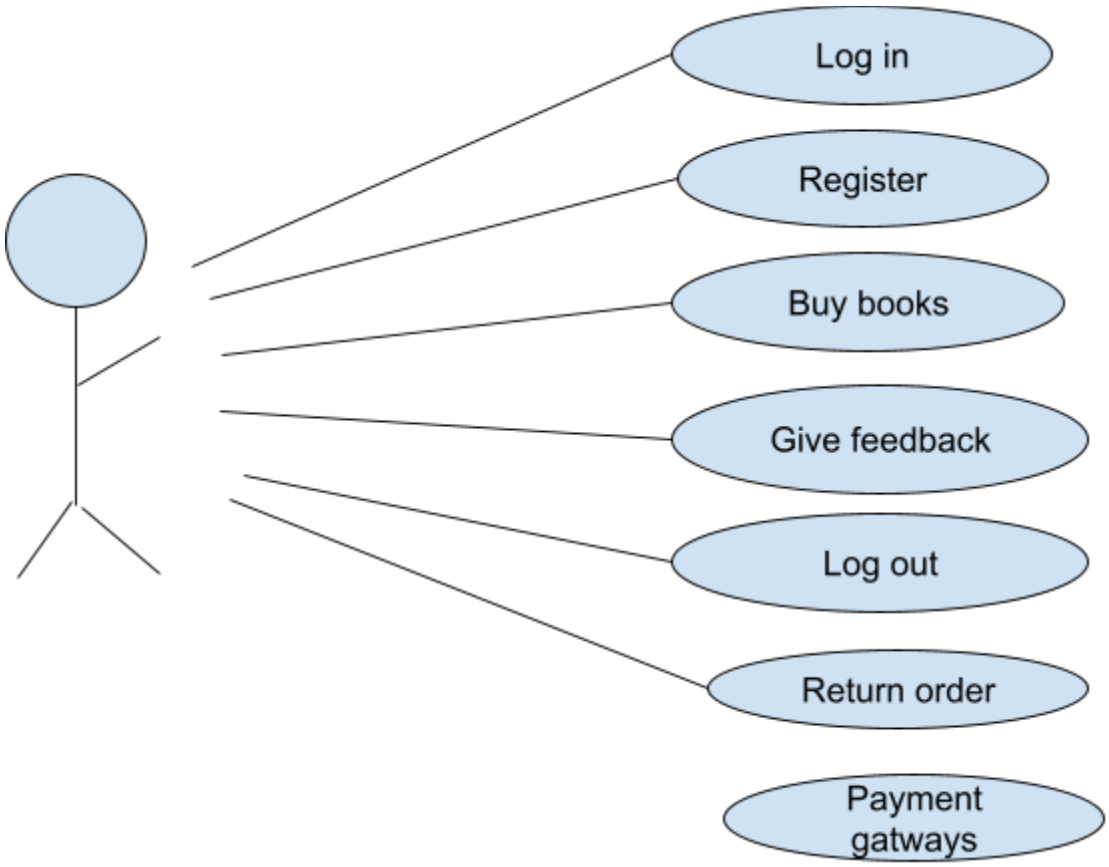
- What is inheritance

  The object of one class can acquire the properties of object of another class is called inheritance.
  *Type of inheritance:

1. Single inheritance
2. Multiple inheritance
3. Multilevel inheritance
4. Hierarchical inheritance
5. Hybrid inheritance

- What is polymorphism
  An ability to take one name having many different forms.
  It has two types
  1. Overriding
  2. Overloading

- Draw usecase on online book shopping


Log in
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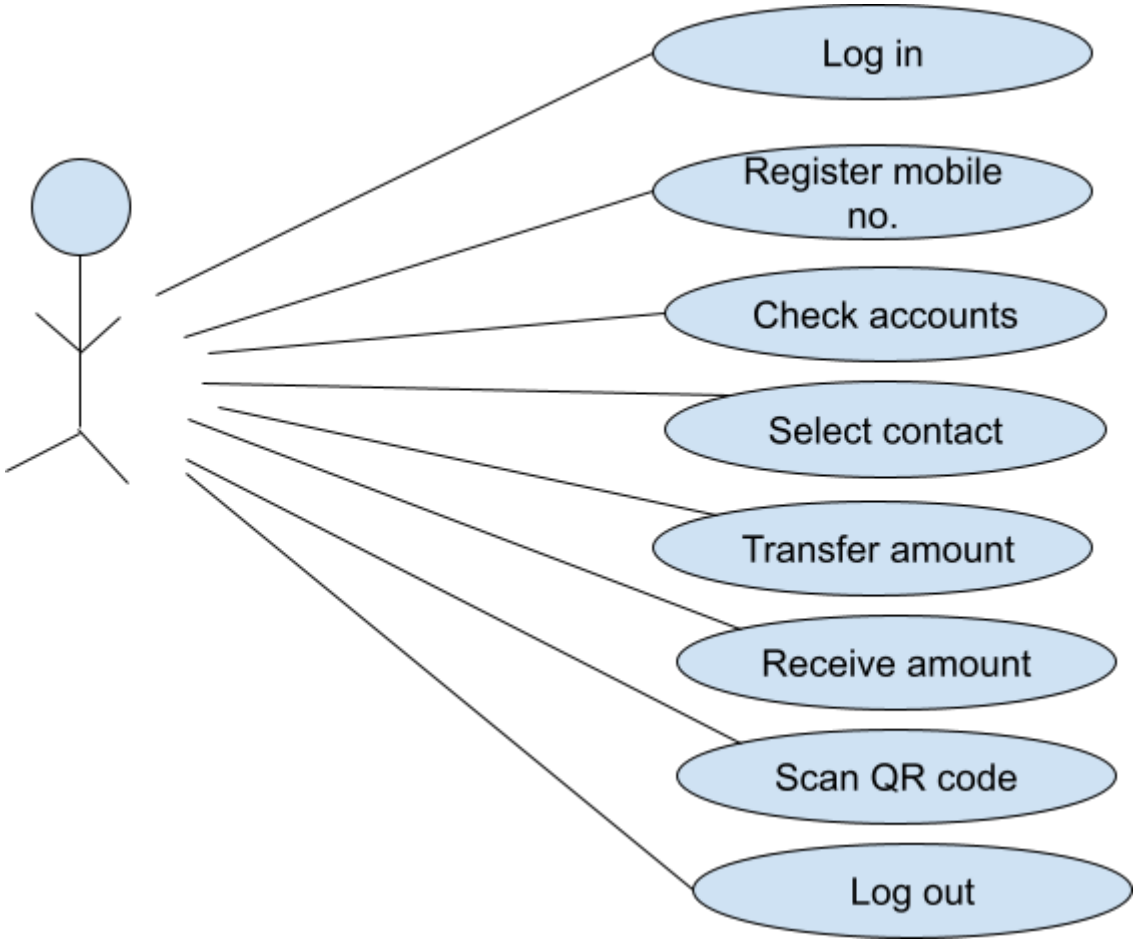
Payment gatways

- Draw usecase on online bill payment system(paytm)



- Write SDLC phases with basic introduction.

  SDLC - Software development life cycle
  - Requirement collection - Establish customer needs.
  - Requirement Analysis - Model and specifies the requirements- ”What”
  - Design - Model and specifies 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

- Explain phases of the waterfall model.

  Waterfall model consists of 6 phases,
  1. Requirement collection
  2. Analysis
  3. Design
  4. Implementation
  5. Testing
  6. Maintenance

Pros:

- As the requirements changes are not allowed , there's very less chances of finding a bug in a software.
- Simple and easy to understand.
- Preferred for small projects.
- Quality products will be good.

Cons:

- High amounts of risk
- Not a good model for complex and object-oriented projects.
- Requirements changes are not allowed.
- Testing will start at the end of life cycle.

- Write phases 0f spiral model.

  Spiral model is iterative model.
  Spiral model has 4 phases.
  1. planning
  2. risk analysis
  3. engineering
  4. evaluation.

- Write agile manifesto principles

  * Individuals and interactions over processes and tools
  * Working software over comprehensive documentation
  * Customer collaboration over contract negotiation
  * Responding to change over following a plan

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

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.

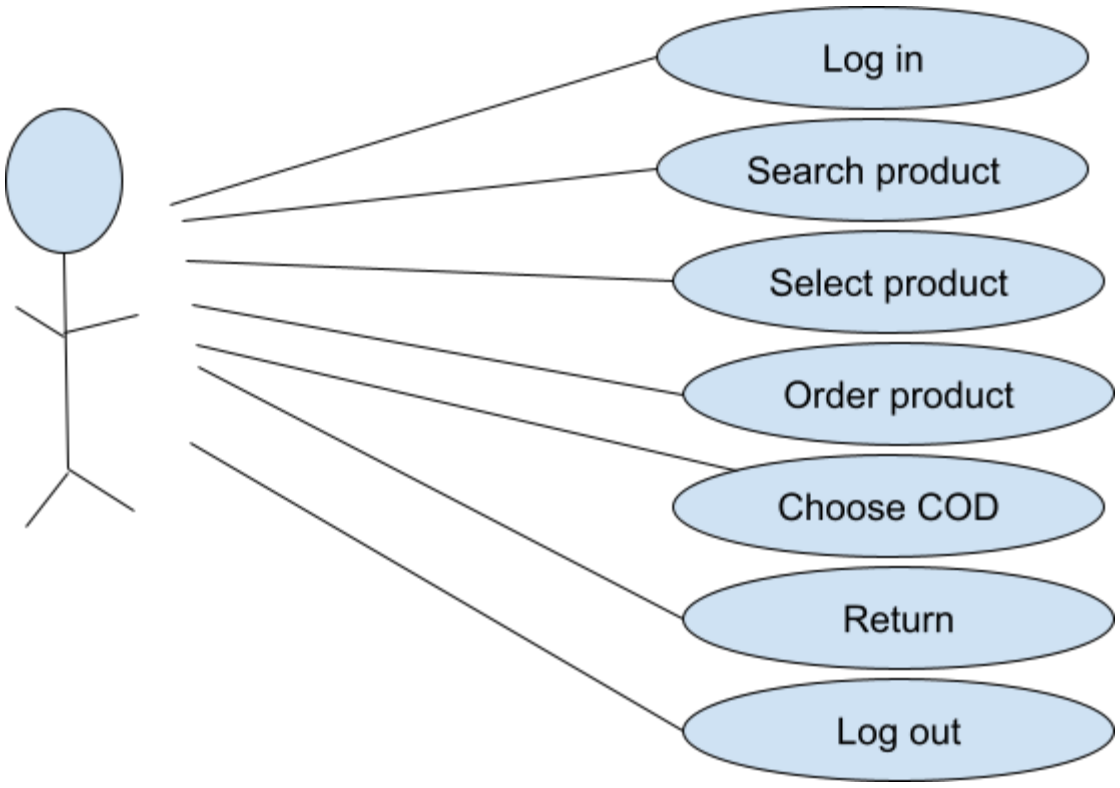
- Agile methods break the product into small incremental builds .
- These builds are provided in iterations.
- Each iteration typically lasts from about one to three weeks.

- 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 stakeholders

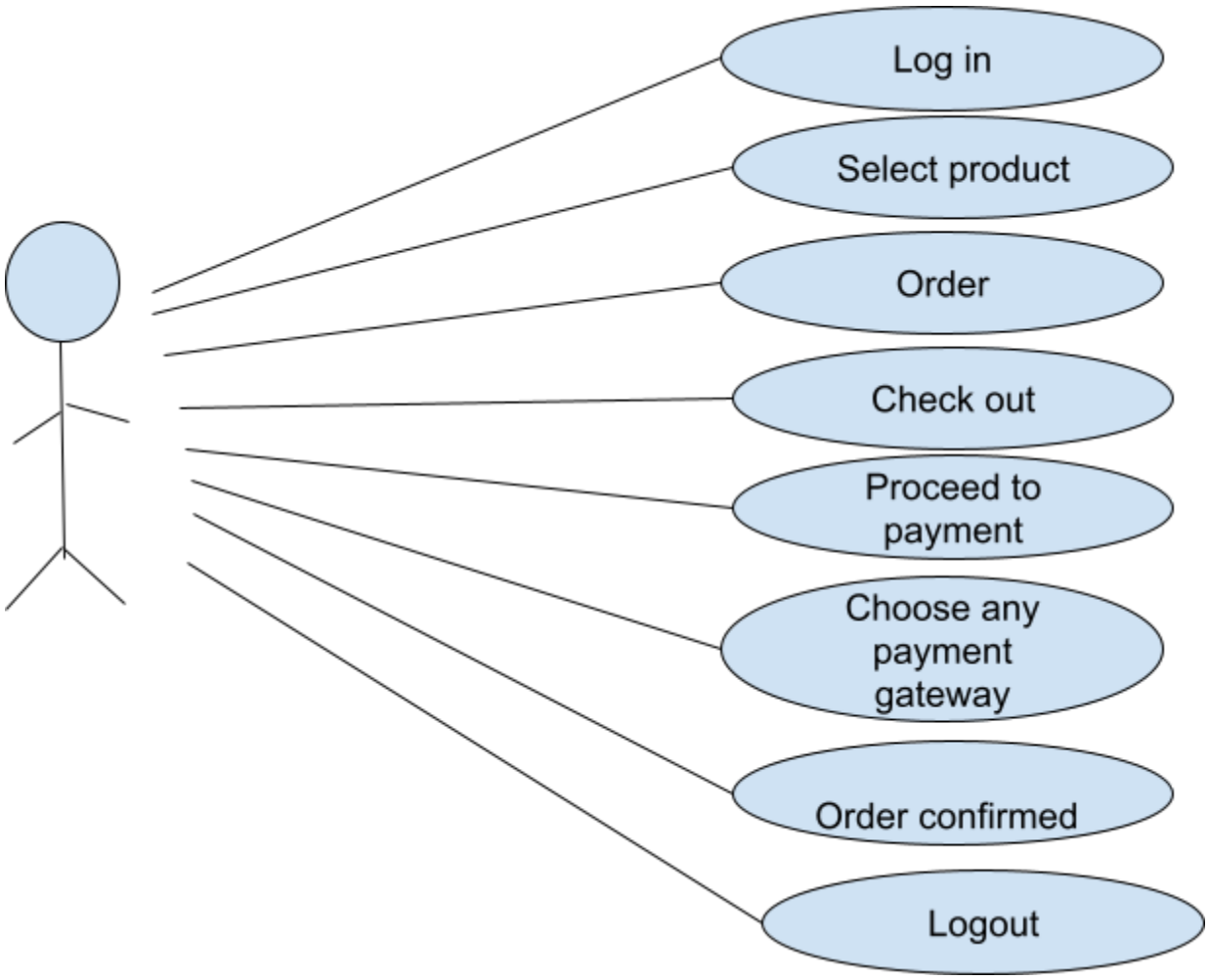
    - Pros:
        - It is very realistic approach to software development
        - Promotes team work and cross training
        - Features can be developed rapidly
        - Resources requirements are minimum
        - Minimal rules , documentation easily employed
        - Little or no planning required
        - 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 challanging due to lack of documentation.

- Draw usecase on online shopping product using COD.



- Draw usecase on online shopping product using payment gateway.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