

Assignment - 1

- **What is SDLC?**

A Software Development Life Cycle is essentially a series of steps, or phases, that provide a model for the development and lifecycle management of an application or piece of software.

- **What is software testing?**

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

- **What is agile methodology?**

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

- **What is SRS?**

A software requirements specification is a complete description of the behavior of the system to be developed.

IT includes a set of use case that describe all the interaction that the users will have with the software.

- **What is oops?**

Object Oriented programming is way of writing the program in organized way objects are like a black box where data are hidden.

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- **Write Basic Concepts of oops.**

1. Class
2. Object
3. Inheritance
4. Polymorphism
 - Over ridding
 - Over loading
5. Encapsulation
6. Abstraction

- **What is object?**

Object gives the permission to access functionality of the class.

- **What is class?**

Class is collection of data member and member function.

- **What is encapsulation?**

The process wrapping the data in a single unit to secure the data from outside world.

- **What is inheritance?**

Making a class from an existing class. Deriving the attribute of some other class.

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- **What is polymorphism?**

One name multiple form.

Overriding: - Same name of function with same parameter but definition will be different.

Overloading: - Function overloading same function name but different parameter.

- **Write SDLC phases with basic introduction.**

Software development life cycle is essentially a series of step or phase that provide model for development and lifecycle management of an application or piece of software.

SDLC phases

1. Analysis: -

Model and specify a requirement.

2. Design: -

Model and specify a solution “Why”.

3. Impanation: -

Construct a solution in a software.

4. Testing: -

Validate a solution against the requirements.

5. Maintenance: -

Repair defect and adapt a solution into new requirements.

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- **Explain phase of the waterfall model.**

The classical software lifecycle models the software development as a step-by-step waterfall between the various development phases.

Waterfall Model phases

Requirement collection/gathering.

Analysis.

Design.

Implementation.

Testing.

Maintenance.

- **Write phases of spiral model.**

The risk handling model is a spiral model.

Spiral Model phases.

Planning: - Determination of objectives, alternatives, and constraints.

Risk Analysis: - Analysis of alternative and identification / resolution of risks.

Engineering: - development of the “next level product”.

Customer Evaluation: - Assessment of the results of engineering.

- **Write agile manifesto principles.**

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.

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Collaboration Customer - 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.

Frequent delivery of working software: - Scrum accommodates. This principle since the team operates in software iteration that ensures regular delivery of working software.

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

- Agile SDLC model is a combination of incremental process model with focus on process adaptability and customer satisfaction by rapid delivery at working software product.
- Agile methods are to break the product into small incremental built.
- These builds are provided in iteration.
- Each iteration involves cross functional teams working simultaneously on various areas like planning, recruitment analysis, design, coding, unit testing ,and acceptance testing.
- At the end of the iteration, the working product is displayed to the customer and important stakeholders.

Pros

- Is a very realistic approach to software development.
- Promotes teamwork and cross training.

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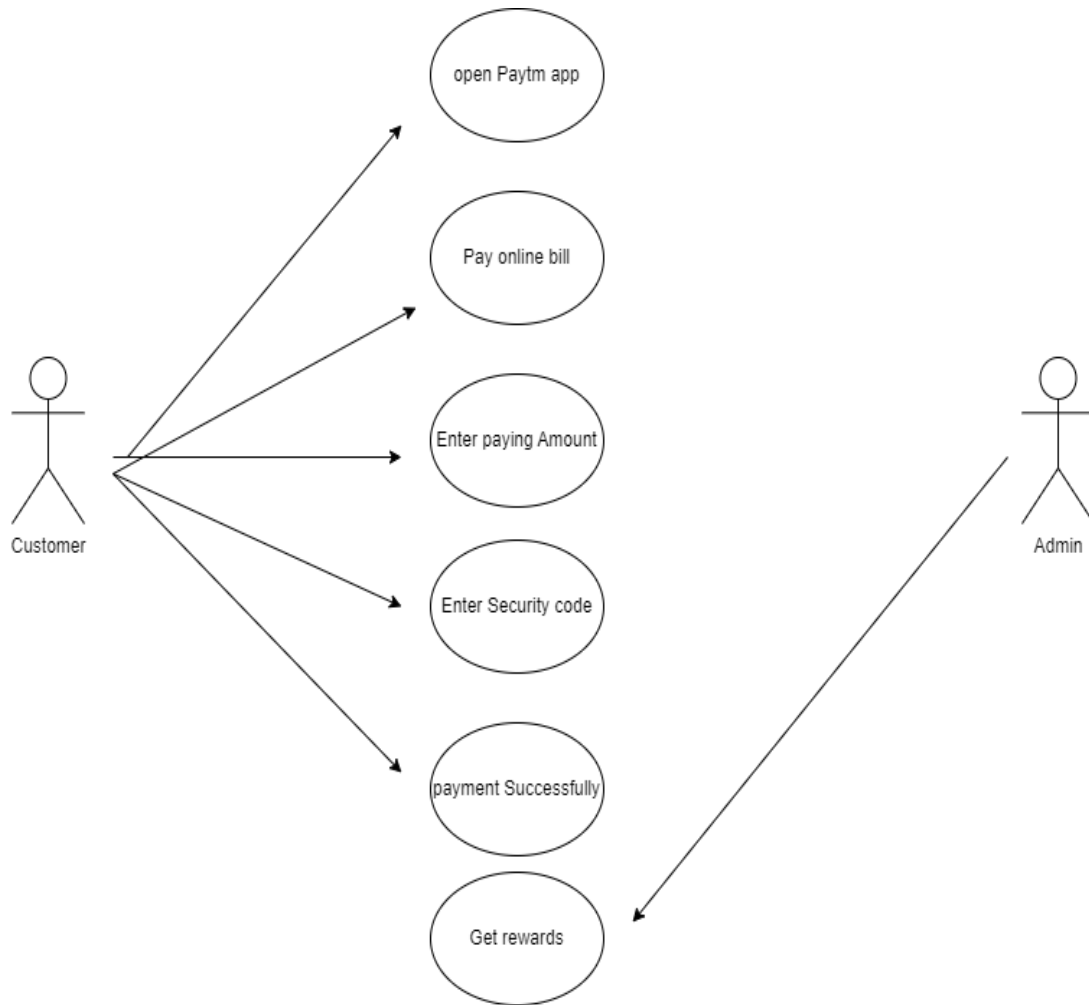
- Functionality can be developed rapidly and demonstrated.
- Resource requirements are minimum.
- Suitable for fixed or changing requirements.
- Easy to manage.
- Gives flexibility to developers.

Cons

- Not suitable for handling complex dependencies.
- 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 documentation.

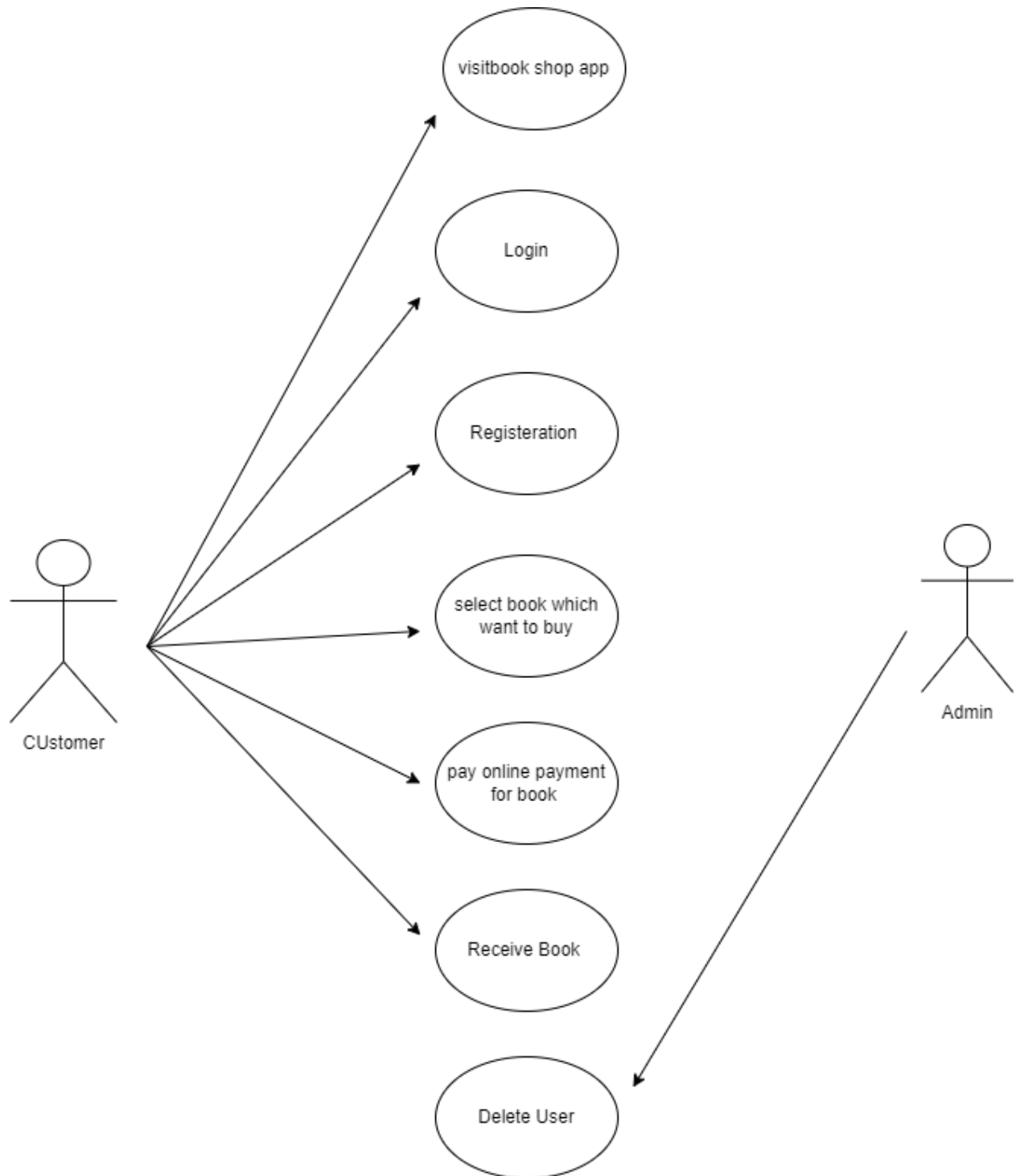
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- Draw Use case on online bill payment system (paytm).



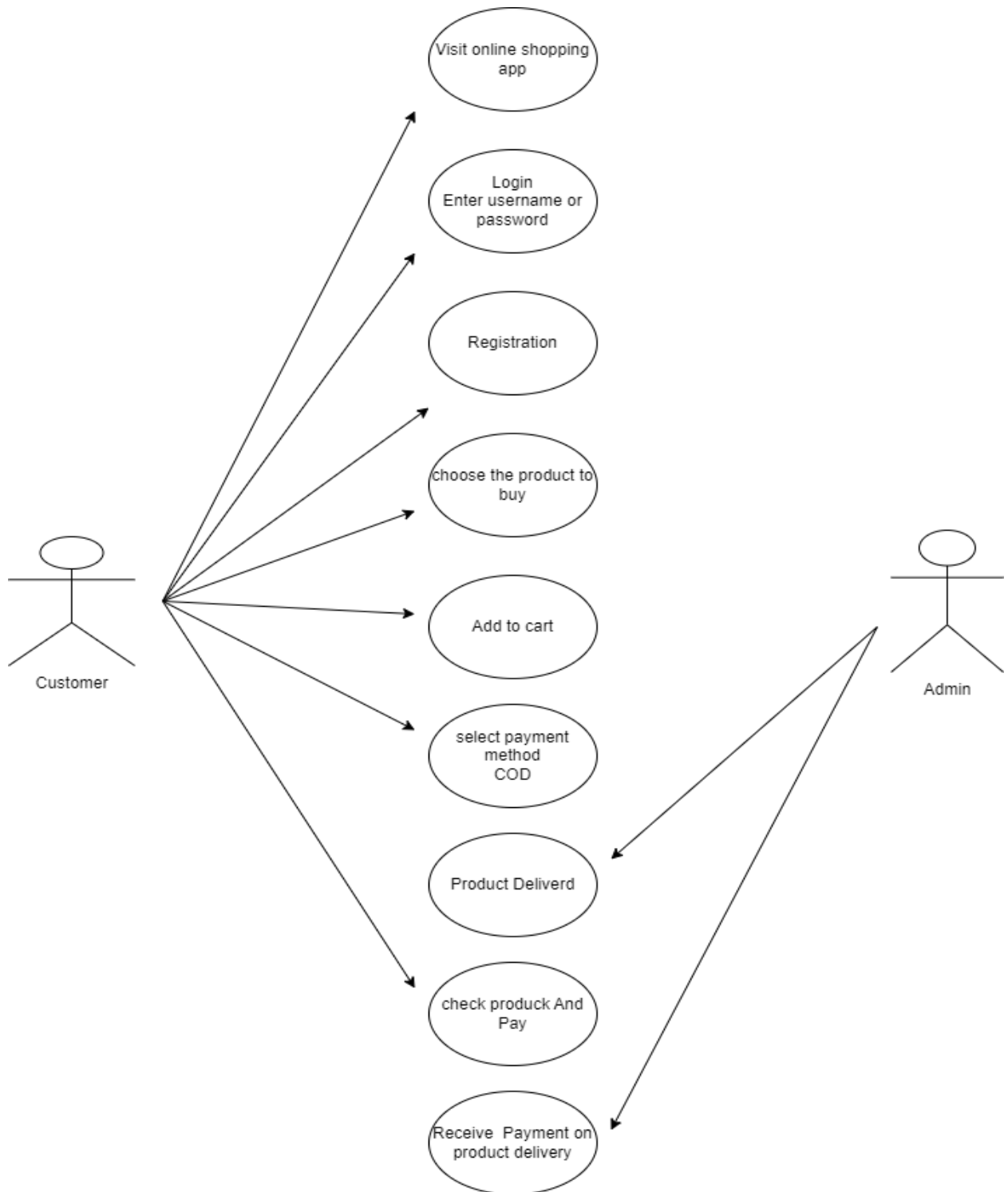
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- Draw Usecase on Online book shopping.



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- Draw usecase on Online shopping product using COD.



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