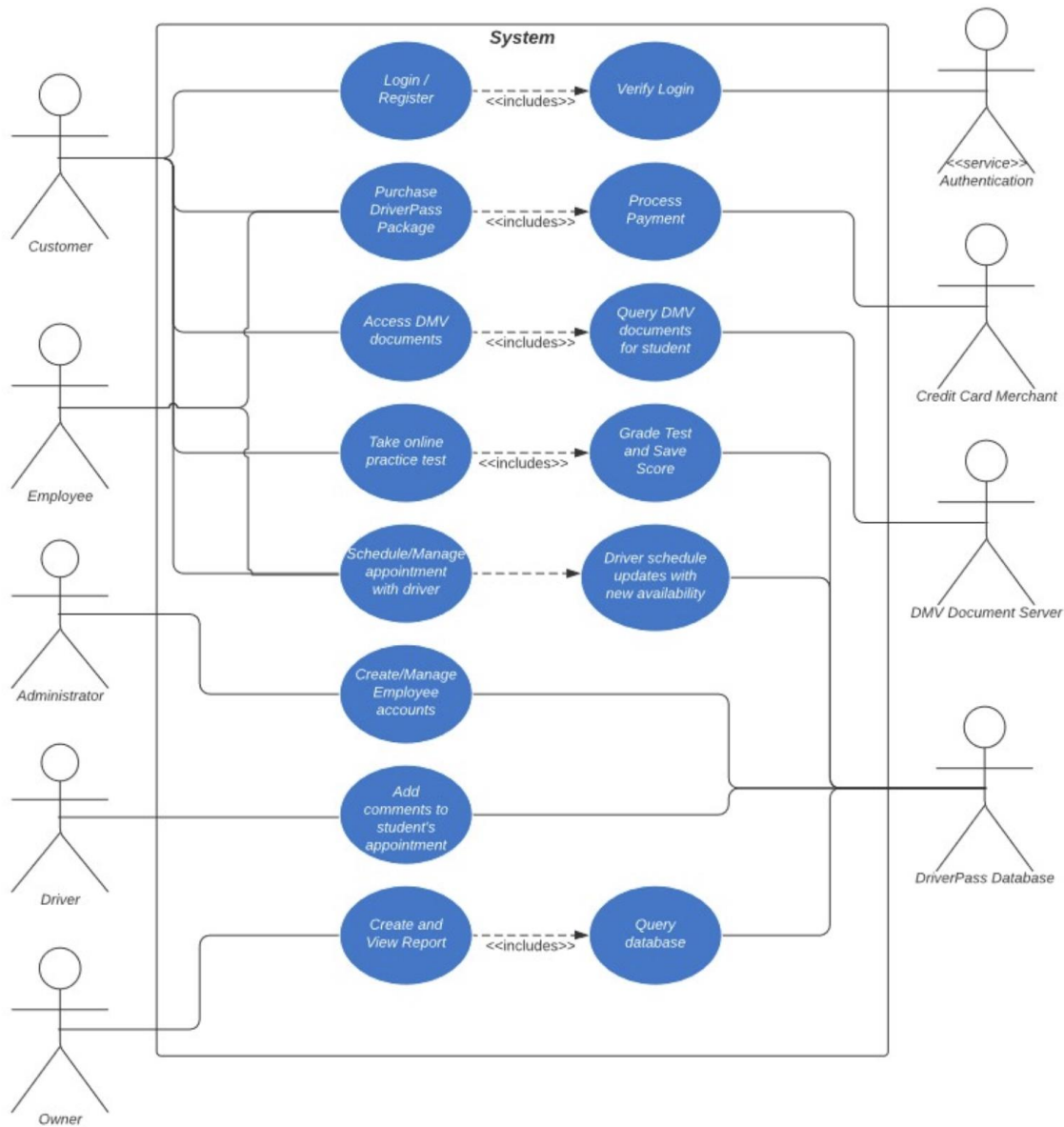**CS 255 System Design Document Template**
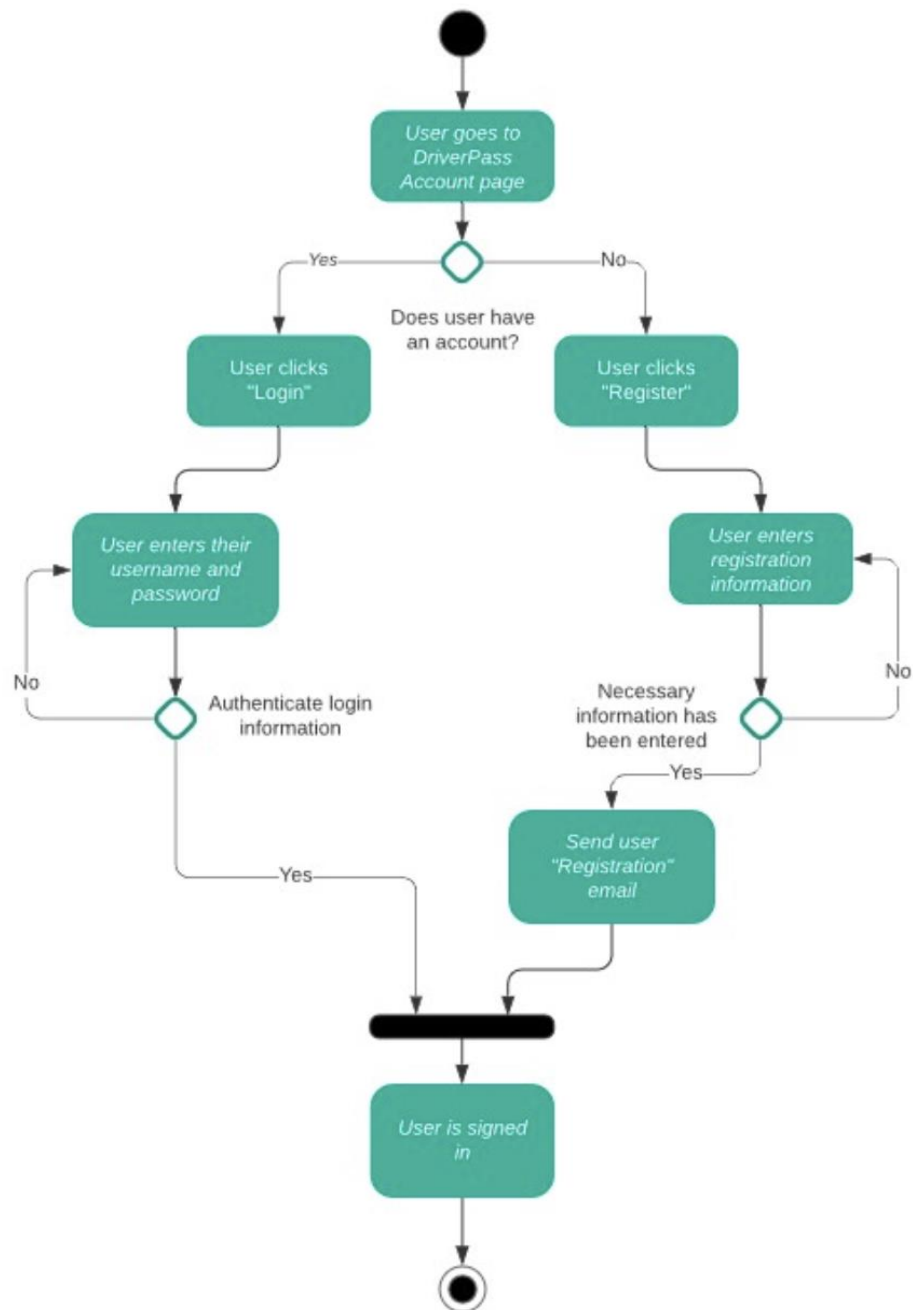
Princess Sihanourath

This template lays out all the different sections that you need to complete for Project Two. Each section has guidance to prompt your thinking. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client's needs. There is no required length for the final document. Instead the goal is to complete each section based on what your client's needs are. Remove this note when you are finished, and replace all bracketed text with the relevant information.
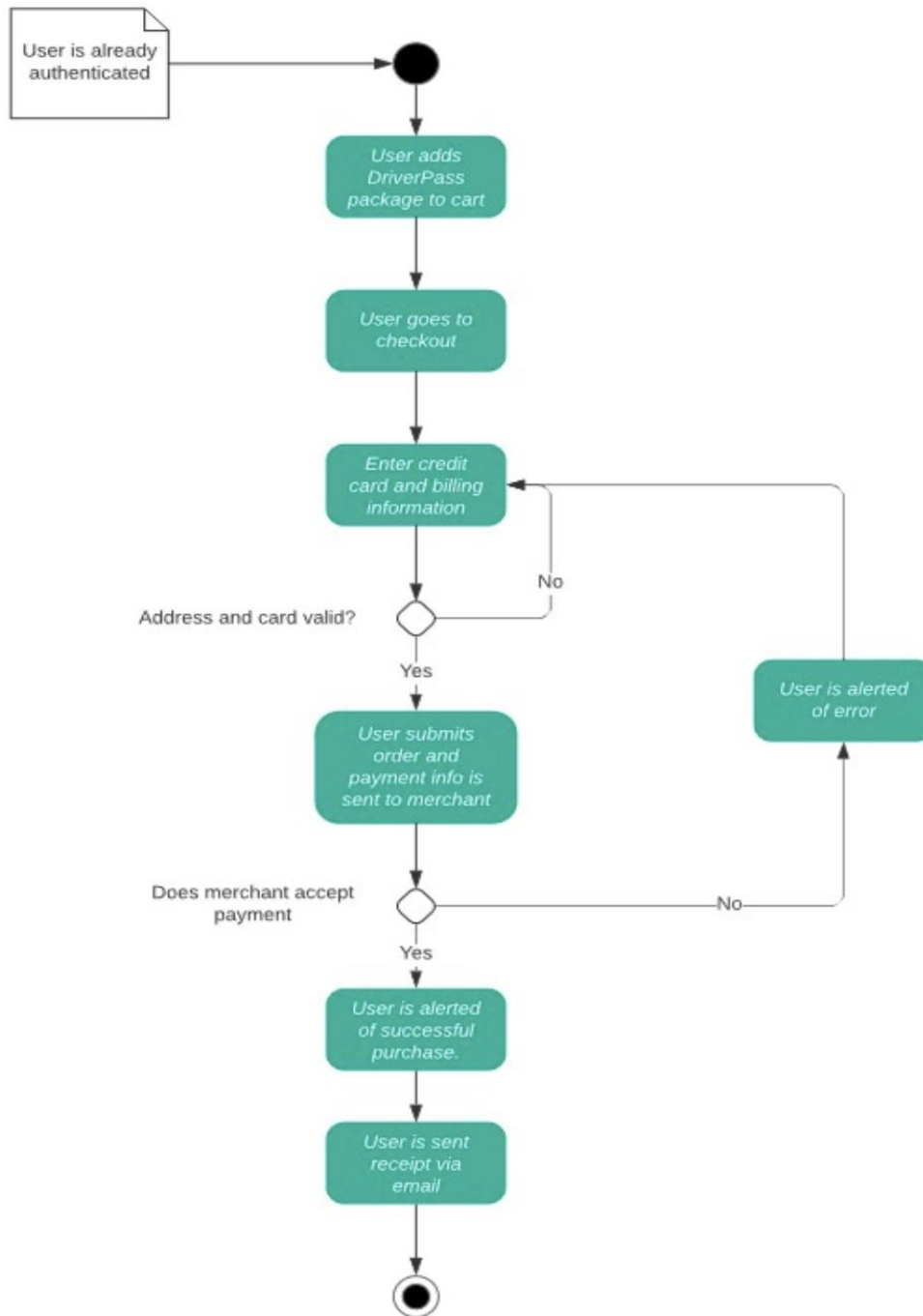
UML Diagrams

Updated UML Use Case Diagram:
DriverPass UML Case

Updated UML Activity Diagrams

Login/Register Activity Diagram

& Purchase Package Activity Program

User is already authenticated

User adds DriverPass package to cart

User goes to checkout

Enter credit card and billing information

Address and card valid?

No

Yes

User submits order and payment info is sent to merchant

User is alerted of error

Does merchant accept payment

No

Yes

User is alerted of successful purchase.
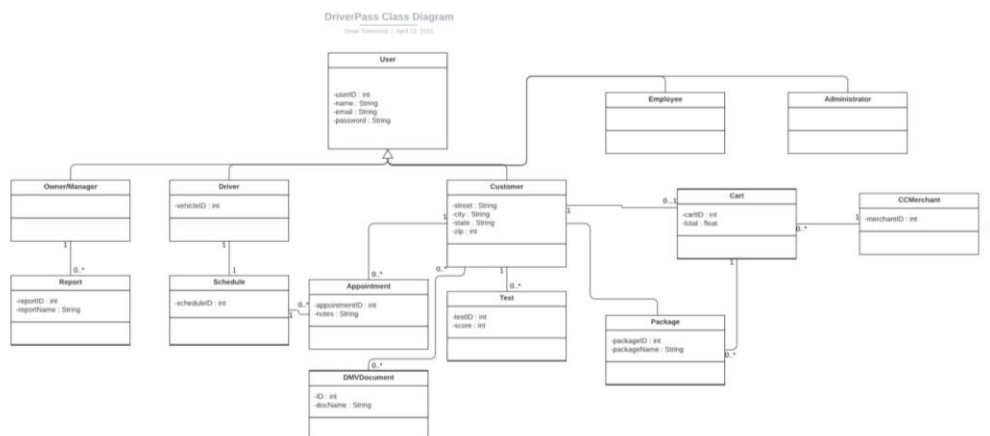
User is sent receipt via email

Final UML Sequence Diagram

*[You were asked to create a sequence diagram based on **one** of the use cases you chose. Please insert your sequence diagram here. Check to make sure that you included appropriate components and symbols and that your design meets the client's needs.]*
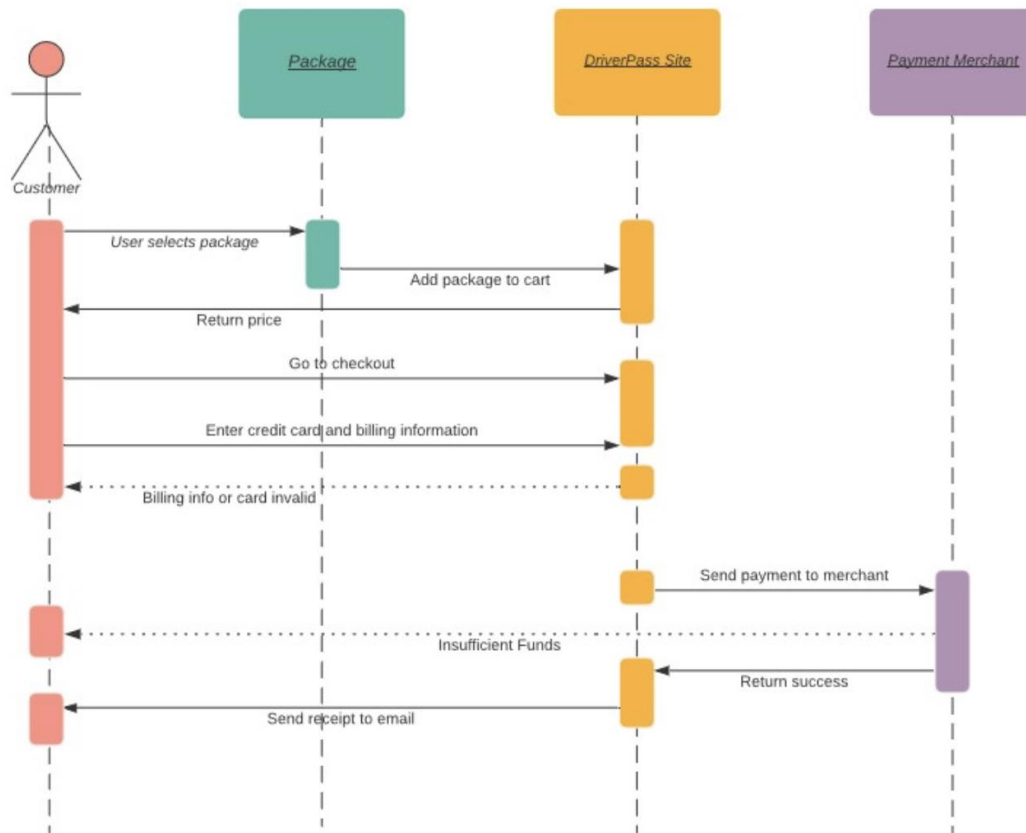
Improved UML Class Diagram

[Based on the diagrams you have created, describe the technical requirements of your system. These requirements should address the required hardware, software, tools, and infrastructure necessary for your system design.]

Hardware Requirements

Dedicated Server: A dedicated server will ensure optimal performance and reliability for the DriverPass application. This server will handle all backend processes, user requests, and database management, minimizing latency and downtime.
- Internet Connection: A high-speed, reliable internet connection is crucial for maintaining seamless access to the website. Redundancy measures, such as a secondary internet connection, should be considered to ensure continuous uptime.
- Storage for Database and Website Data: Adequate storage capacity is necessary to accommodate user data, driving test records, and other critical information. An initial estimate of storage needs should be based on projected user volume and data retention policies.
- Computer or Mobile Device for User Access: The system should be accessible via both desktop and mobile devices to cater to all user preferences. This flexibility enhances user experience and increases engagement.
- Firewall: A robust firewall is essential to protect the website from unauthorized access and potential attacks. It will monitor incoming and outgoing traffic, safeguarding the system's integrity.

Software Requirements
- Windows Server: Using the most stable release of Windows Server is recommended for hosting the application. This platform offers a secure and familiar environment for development and deployment, with robust support for various applications.
- SQL Server: For database management, the most stable release of SQL Server is ideal, providing reliability and advanced features for data handling. It supports complex queries and large datasets, which are vital for managing user information effectively.
- Backup Software: Implementing backup software is critical for data protection. Regular backups of both the website and database will ensure quick recovery in the event of data loss or corruption.
- Web Server: A web server like Apache is recommended for serving the website. It is highly configurable and widely used, providing excellent support for various programming languages and frameworks.
- Security Software: To prevent malware and other security threats, robust security software should be installed. This software will help to detect and neutralize potential threats in real time, safeguarding user data and system integrity.