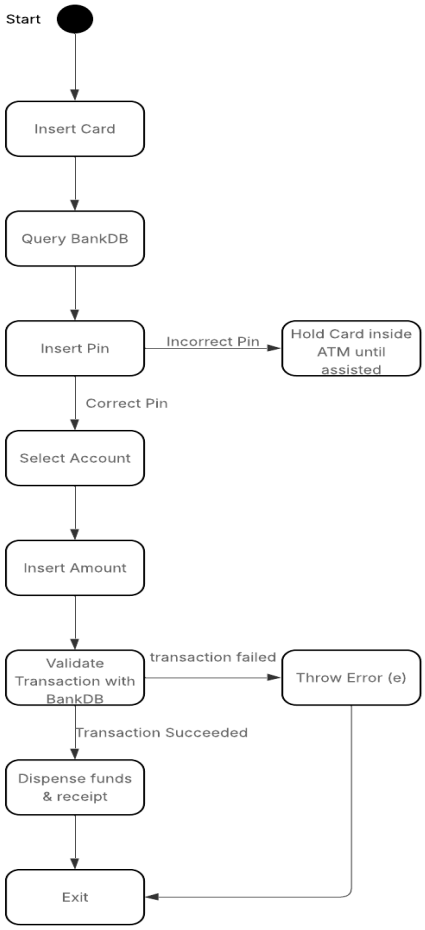
CS 255 System Design Document Template

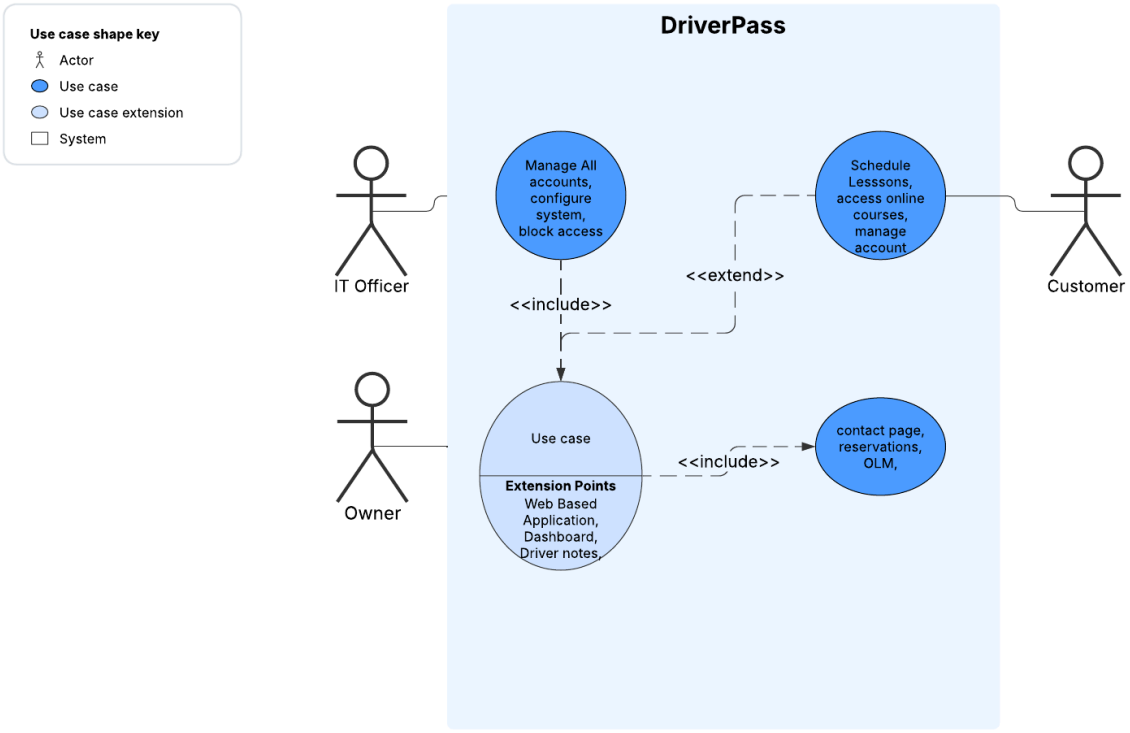
This template lays out all the different sections that you need to complete for Project Two. Each section has guidance to prompt your thinking. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client's needs. There is no required length 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

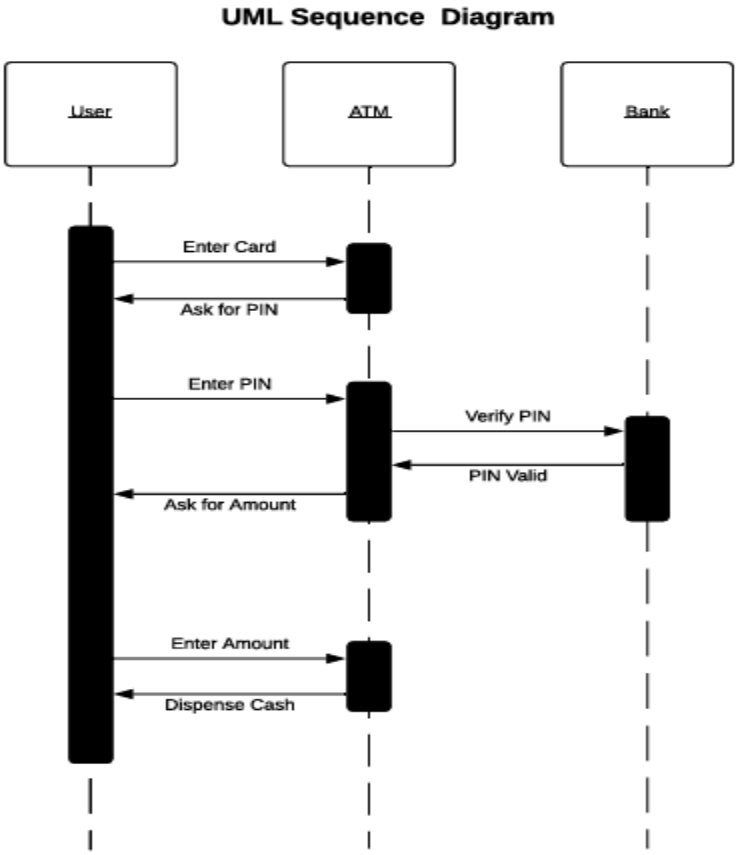
UML Use Case Diagram



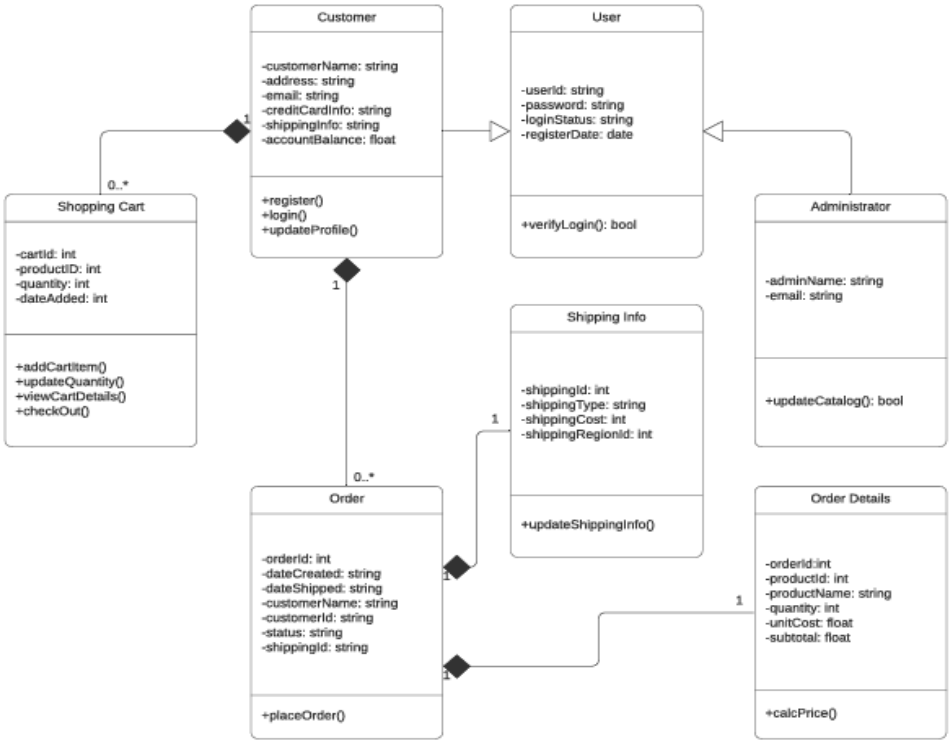
UML Activity Diagrams



UML Sequence Diagram



UML Class Diagram



Technical Requirements

The DriverPass's functional and nonfunctional requirements, based on the UML diagrams, are as follows

- Hardware:
- Servers to host the web application and database.
- Backup systems for data redundancy and recovery.
- Software:
- Web server software (e.g., Apache or Nginx) for hosting.

- Database management system (e.g., MySQL) for storing student, instructor, and booking data.
- Programming languages/frameworks (e.g., Python/Django or Java/Spring) for development.
- Tools:
- Development environment (e.g., IntelliJ IDEA or VS Code).
- Version control (e.g., Git) for team collaboration.
- Testing tools (e.g., Selenium) to ensure system reliability.
- Infrastructure:
- Cloud hosting (e.g., AWS) for scalability and accessibility.
- Network security (e.g., firewalls, SSL encryption) to protect data.
- Load balancers to manage high user traffic.
- Nonfunctional Requirements:
- Performance: Must support multiple simultaneous bookings with minimal delay.
- Scalability: Capable of expanding as DriverPass grows.
- Security: Encryption for payments and user data; role-based access controls.
- Usability: Simple, intuitive interfaces for all users.