# CS 255 System Design Document

## UML Diagrams

### UML Use Case Diagram

A diagram of a driver pass system

Description automatically generated

### UML Activity Diagrams

### A diagram of a customer service Description automatically generated

A diagram of a system

Description automatically generated

### UML Sequence Diagram

### A diagram with text and pink squares Description automatically generated with medium confidence

### UML Class Diagram

A diagram of a software application

Description automatically generated

## Technical Requirements

Based on the diagrams I’ve created for the DriverPass system, the technical requirements are:

**Hardware:**

The system will need cloud-based servers to host the application and store user data, such as lesson bookings, user profiles, and progress. This will ensure that the system is available anytime, anywhere. Users can access it through any device, whether a computer, phone, or tablet.

**Software:**

The system's backend will be built using a web framework like Spring Boot, which will handle all data processing. The frontend will use React or Angular to create a smooth, responsive interface for customers and employees. A relational database like MySQL will store data securely, and we’ll use encryption to protect sensitive information.

**Tools:**

Tools like Lucidchart will help manage and update the UML diagrams for the system’s structure. For development and deployment, we’ll use version control tools like GitHub and automate workflows with Jenkins or GitHub Actions.

**Infrastructure:**

The system will run on a cloud platform like AWS or Azure, ensuring scalability as more users join DriverPass. Additionally, tools like CloudWatch or the ELK Stack will monitor the system and handle logging to detect issues early and maintain smooth operations.

This setup will provide a secure, scalable, and reliable system to meet DriverPass’s needs.