# CS 255 System Design Document Template

Cassidy Reinitz

June 15th, 2025

## UML Diagrams

### UML Use Case Diagram

A diagram of a driver pass system

AI-generated content may be incorrect.

### UML Activity Diagrams

A diagram of a process

AI-generated content may be incorrect.

### UML Sequence Diagram*A diagram of a project AI-generated content may be incorrect.*

### UML Class Diagram

A diagram of driving lessons

AI-generated content may be incorrect.

## Technical Requirements

*The DriverPass system is a web-based and mobile-accessible platform designed to manage driver education services. Based on the UML diagrams and identified use cases, the following technical components are required:*

* ***Hardware Requirements:***
  + *A cloud-hosted web server with at least 16 GB RAM and a quad-core processor.*
  + *Mobile devices for instructors to access schedules and lesson information on the go.*
  + *Secure storage servers to manage user data, lesson schedules, and test results.*
* ***Software Requirements:***
  + *Web application built with a responsive frontend framework (e.g., React or Angular).*
  + *Backend application using Node.js, Java Spring Boot, or equivalent for secure API services.*
  + *Integration with DMV systems via a RESTful API to sync policies and test updates.*
  + *Password recovery functionality with secure email verification.*
* ***Tools and Platforms:***
  + *Lucidchart or similar CASE tool for ongoing system modeling.*
  + *Microsoft Excel or Google Sheets support for report export features.*
  + *Secure payment gateway integration for processing transactions.*
  + *Role-based access control features for administrators, secretaries, and IT officers.*
* ***Infrastructure Requirements:***
  + *Cloud platform (e.g., AWS, Azure, or Google Cloud) with automatic daily backups and uptime monitoring.*
  + *Encrypted database (e.g., MySQL or PostgreSQL) for secure storage of user profiles, appointments, and test scores.*
  + *Scalable architecture to support growth and future features like customizable packages.*
  + *Logging and audit tracking system to record user activity, such as lesson changes or cancellations.*