# CS 255 System Design Document McNaney

## UML Diagrams

### UML Use Case Diagram

*A screenshot of a computer

AI-generated content may be incorrect.*

### UML Activity Diagrams

[Register Account]

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AI-generated content may be incorrect.

[Schedule Lesson]

A diagram of a flowchart

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**UML sequence Diagram**

[Schedule appointment]

A screenshot of a computer program

AI-generated content may be incorrect.

### UML Class Diagram

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## Technical Requirements

The DriverPass system will operate as a secure, cloud-hosted web application that allows customers to register, schedule lessons, and take online practice tests. The system requires reliable client devices such as computers, tablets, or smartphones with an internet connection and modern web browsers. On the server side, it will run on a Linux or Windows Server environment with at least 8 GB of RAM, 4 CPU cores, and 250 GB of storage. The application will use technologies such as HTML, CSS, and JavaScript for the client interface and a server framework like Flask, Spring Boot, or ASP.NET for backend logic. A relational database (MySQL or PostgreSQL) will manage user, lesson, and reservation data, while an SMTP-compatible email service will handle notifications and confirmations. Cloud hosting through AWS, Azure, or Google Cloud will provide scalability, data backup, and security features such as HTTPS encryption and role-based access control. Development tools will include Visual Studio Code, GitHub for version control, and Lucidchart for UML modeling. This configuration ensures a reliable, secure, and efficient environment to meet all DriverPass business and user needs.