# CS 255 System Design Document Template

## UML Diagrams

### UML Use Case Diagram

A diagram of a software application

AI-generated content may be incorrect.

### UML Activity Diagrams

*A diagram of a process

AI-generated content may be incorrect.A diagram of a computer program

AI-generated content may be incorrect.*

### UML Sequence Diagram

*A diagram of a customer

AI-generated content may be incorrect.*

### UML Class Diagram

A diagram of a company

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## Technical Requirements

The minimum technical requirements would pertain to backend requirements, Frontend format, security considerations, performance and availability and core functionalities.

**Backend & Database**

* Cloud hosted for scalability on either AWS or Azure for example
* Database support on MySQL, oracle or PostgreSQL.
* Backend support with Java or python with API support.

**Frontend**

* Web-based accesability through Chrome, Firefox, Edge, Safari. Would need to interact with the back end support.
* Consistent design throughout the website.

**Security**

* Role-based access control (RBAC).
* Encryption for data at rest (stored data) and secure HTTPS website.
* Two-factor authentication (2FA) for logins.

**Performance & Availability**

* Able to support up to 400-600 users.
* Response time for interacting with the webpage should be under 3 seconds.
* Should be available 24/7 with no downtime.

**Core Functionalities**

* Payment processes should comply with PCI DSS security controls
* User should be able to schedule driving lessons without interfering with other schedules for the same driver, dates and times.
* Administrators should have a interactive interface to managing users, logs and reports.