# CS 255 System Design Document Template

## UML Diagrams

### UML Use Case Diagram

A diagram of a person's diagram

Description automatically generated

### UML Activity Diagrams

*A diagram of a software company

Description automatically generatedA diagram of a work flow

Description automatically generated*

### UML Sequence Diagram

*A diagram of a diagram

Description automatically generated*

### UML Class Diagram

*A diagram of a driver pass system

Description automatically generated*

## Technical Requirements

Servers:

* A cloud-based or on-premises server to host the application, database, and associated tools.

Client Devices:

* The system should support a wide range of devices for users, such as:
* Desktops and laptops for administrators and instructors.
* Mobile devices (smartphones, tablets) for students.

Database Management:

* MySQL or PostgreSQL for storing customer data, reservations, and system records.

Security Tools:

* TLS 1.2 or higher for encrypted data transfer.
* AES-256 encryption for sensitive data storage.
* Role-Based Access Control (RBAC) mechanisms for managing user permissions.

Monitoring and Logging:

* Tools like AWS CloudWatch, ELK Stack, or Datadog to monitor system performance and log critical activities.

Bandwidth:

* Adequate internet bandwidth is necessary for hosting the web application and supporting up to 500 concurrent users.