# CS 255 System Design Document Template

## UML Diagrams

### Diagram Description automatically generatedUML Use Case Diagram

### UML Activity Diagrams

Diagram

Description automatically generated

### Diagram Description automatically generated

### Diagram Description automatically generatedUML Sequence Diagram

### UML Class Diagram

Diagram, schematic

Description automatically generated

## Technical Requirements

Availability:

* The system will maintain 95% availability.

Reliability:

* The system will maintain a mean time between failures of 60 days or greater.

Performance:

* The system will have an average load time of less than 5 seconds

Throughput:

* The system will support 500 concurrent users while meeting requirements.

Standards:

* The system will comply with all company and DMV standards.

Authentication & Authorization:

* The system will require an admin PIN for any processes restricted to admin access.
* The system will require an employee PIN for any processes restricted to employee access.
* The system will validate a username and password for all users upon system access attempt.

Serviceability:

* System updates will be done iteratively.
* The system will not need to experience downtime to update.

Maintainability:

* The system will store a log of all changes made by the system and users.
* The system will have an average repair time of less than 2 hours.

Accessibility:

* The system will feature accessibility measures for all components.

Privacy:

* The system will hide sensitive user information from the interface and all other users.

Human Error:

* The system will validate the format of dates, email addresses, and phone numbers.

System Errors:

* The system will send an alert to the admin team upon system error.

Information Security:

* The system will encrypt user credentials and sensitive information in storage and transport.

Data:

* The system will create temporary transformable copies to of permanent data stored in databases upon access.

Productivity:

* The system will display relevant user information on a single interface.

Structure:

* The system will support a hierarchy of no more than 3 interfaces.

Interoperability:

* The system will operate on Chrome, Edge, Firefox, and Safari browsers and mobile browsers.
* The system will be accessible through mobile and desktop devices.

Vendor Lock-In:

* The system will employ open-source and custom code.