# CS 255 System Design Document Template

## UML Diagrams

### A diagram of a network Description automatically generatedUML Use Case Diagram

### A diagram of a flowchart Description automatically generatedUML Activity Diagrams

A screenshot of a computer

Description automatically generated

### UML Sequence Diagram

A screenshot of a computer screen

Description automatically generated

### UML Class Diagram

*A screenshot of a computer

Description automatically generated*

## Technical Requirements

*In order to facilitate the DriverPass system, we require a central web server with 99.9% uptime. When users connect to the server by visiting the web app, it will allow the app to display any information stored in the central server. This allows us to unify the system across all devices as each device will be reading the same data from the central server. It also helps to prevent redundant data as changes will be checked against the central server before committing. When an appointment is scheduled by user A, it will update the central server first. Then when user B connects to the app, they will see the new appointment created by user A as it appears on the server. The data on the server will need to be formatted to a database for easy data storage. As such, the usage of MySQL will allow for easy queries of data. The MySQL server will hold all of the raw data for the application only. When a change is requested by a user, a series of MySQL commands will occur to alter the data. In combination, these two components will allow for the portability and compatibility requested by the client resulting in an application accessible from any device. In addition, the system needs to accurately authenticate and authorize user logins. This can be done by comparing their data to passwords hashed in the server and ensuring they match. Once 5 incorrect attempts have been made, the system must automatically lock the account. The system should then prompt for a password reset on its own. And finally, the system must keep a constant line of communication with the DMV. By ensuring that the two systems always have a connection, it ensures that any DMV updates are swiftly passed over to the DriverPass team to ensure that testing remains within regulation as requested by the client.*