# CS 255 System Design Document Template

## UML Diagrams

### UML Use Case Diagram

*A diagram of a driver pass system

Description automatically generated*

### UML Activity Diagrams

*Activity Diagram 1: Booking an Instructor:*

*A diagram of a login

Description automatically generated*

*Activity Diagram 2: User Access Test Results*

*A diagram of a login process

Description automatically generated*

### UML Sequence Diagram

A diagram of a login system

Description automatically generated

### UML Class Diagram

*A diagram of a software server

Description automatically generated with medium confidence*

## Technical Requirements

The DriverPass system will be hosted on cloud infrastructure like Amazon Web Services or Microsoft Azure, will seamlessly integrate with DMV updates. The cloud-based solution covers both the cloud server and database components, eliminating the need for physical hardware. The cloud database will store stateful system information, including user data and appointment reservations, while also supporting an integration for DMV updates. User authentication will be managed through a REST API, providing secure data transmissions. Software components will be developed using Python and will run on the cloud server, providing 24/7 access for users. Weekly maintenance for routine updates and quarterly maintenance for larger changes will ensure the system adapts to changing business and customer needs. Security measures include unique usernames and secure passwords for user login, SSL certificates, HTTPS for data exchange, and an account lockout feature. Users will have the option to securely reset their passwords through verified email links. Admins will enjoy full system access for maintenance, updates, and issue resolution. IT officers will have the ability to access reports offline and review important system reports for audits.