# CS 255 AG System Design Document

## UML Diagrams

### UML Use Case Diagram

A diagram of a driver pass

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### UML Activity Diagrams

A diagram of a user login activity diagram

Description automatically generatedA diagram of a package purchase

Description automatically generated

### UML Sequence Diagram

A diagram of a user login sequence diagram

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### UML Class Diagram

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## Technical Requirements

The DriverPass system is planned to be a web-based application developed using Python. We will use the Django framework for the back end to enable development and a user-friendly design. To create an engaging user interface, we have chosen React.js for the front end. The database will store various types of data, including user login details, training schedules, exam scores, and instructor availability.

The core functionalities of our system are encapsulated within the Python codebase. This includes modules for user registration and profile management scheduling, on-the-road training sessions, conducting practice exams securely, and processing payments. We will keep records for each module to make it easier for future updates and maintenance.

Ensuring security is our priority. All data transmission will be done using HTTPS to guarantee encryption during transit. User passwords will be stored in a format utilizing the SHA 256 cryptographic algorithm for maximum protection. Additionally, we'll incorporate rate-limiting and intrusion detection systems to minimize the risks of brute-force attacks.

By following these specifications, the DriverPass system aims to deliver a strong, secure, and scalable solution that caters to the varied requirements of both students and instructors in the driver training industry.