# CS 255 System Design Document Template

## UML Diagrams

### UML Use Case Diagram

*A diagram of a person's work flow

Description automatically generated*

### UML Activity DiagramsA diagram of a login Description automatically generatedA diagram of a payment method Description automatically generated

User Making a Purchase

User Login

### UML Sequence Diagram

*A diagram of a purchase package

Description automatically generated*

### UML Class Diagram

A diagram of a computer

Description automatically generated

## Technical Requirements

The technical needs of the Driver Pass login and transaction system encompass various hardware, software, and infrastructure components necessary for smooth operation. First, on the hardware side, users will require modern devices with internet connectivity, such as computers or mobile devices, to access the system. Additionally, the system itself relies on robust and redundant servers with specific performance and storage capabilities to handle user traffic and transactions effectively. A reliable network infrastructure with ample bandwidth ensures fast and uninterrupted system access.

In the realm of software, the system demands a secure and scalable platform, including an up-to-date operating system to defend against vulnerabilities. It should also integrate secure identity verification tools, possibly using multi-factor authentication for added safety. The system's core application should be developed using dependable programming languages and frameworks to ensure top-notch performance and reliability. Regular updates and patches are crucial to stay protected against emerging security risks. To manage user data and transaction history, a robust database management system with backup and disaster recovery mechanisms is essential.

In summary, these technical requirements are designed to guarantee the security, efficiency, and reliability of the Driver Pass login and transaction system, ensuring a seamless experience for users, and accommodating future growth.