# CS 255 System Design Document Template

This document outlines the system design for DriverPass, a platform that provides online training and resources for individuals preparing for driving tests. The design incorporates elements of both object-oriented and process modeling approaches to cater to the specific needs of the system.

## UML Diagrams

### UML Use Case Diagram

A diagram of a system

Description automatically generated

### UML Activity Diagrams

A diagram of a software flowchart

Description automatically generatedA diagram of a student instruction

Description automatically generated

### UML Sequence Diagram

A diagram of a process

Description automatically generated

### UML Class Diagram

A diagram of a driver pass class

Description automatically generated

## Technical Requirements

## Hardware

## Servers with sufficient processing power and storage capacity to handle user data, course materials, and application functionalities.

## Network infrastructure to ensure reliable connectivity for users and system operations.

## Software

## Operating system: Linux or Windows Server

## Programming language: Python, Java, or similar language suitable for web development

## Database management system: MySQL, PostgreSQL, or similar solution for data storage and retrieval

## Web server: Apache, Nginx, or similar software to host the application.

## Tools

## Integrated development environment (IDE) for code development and testing

## Version control system (e.g., Git) for managing code changes and collaboration.

## Testing tools for unit testing, integration testing, and user acceptance testing

## Infrastructure

## Cloud-based infrastructure (e.g., AWS, Azure) for scalability, reliability, and cost-effectiveness

## Security measures to protect user data and system resources, including firewalls, intrusion detection/prevention systems, and data encryption.