# CS 255 System Design Document Template

## UML Diagrams

### UML Use Case Diagram

### *A diagram of a driver pass system AI-generated content may be incorrect.*

### UML Activity Diagrams

### A diagram of a computer program AI-generated content may be incorrect.

### A diagram of a process AI-generated content may be incorrect.

### UML Sequence Diagram

A diagram of a purchase package

AI-generated content may be incorrect.

### UML Class Diagram

*A diagram of a system

AI-generated content may be incorrect.*

## Technical Requirements

***Hardware Requirements***

* ***Dedicated Server:*** *A dedicated web server will host the DriverPass website and database, ensuring reliable uptime and fast response times for all users.*
* ***Reliable Internet Connection:*** *Continuous high-speed connectivity is required to support user logins, data retrieval, and secure transactions.*
* ***Adequate Storage:*** *Sufficient disk space will be allocated for user accounts, course materials, test simulations, and transaction records.*
* ***User Devices:*** *The system will be accessible via desktop and mobile devices, allowing users to log in, register, and purchase packages from anywhere.*
* ***Firewall Protection:*** *A hardware or software firewall will be implemented to safeguard open ports, block unauthorized access, and secure data transfers.*

***Software Requirements***

* ***Operating System:*** *Windows Server (recommended) for system stability and scalability.*
* ***Database Management System:*** *Microsoft SQL Server (latest stable release) to store user profiles, course data, and payment records.*
* ***Web Server:*** *Apache or IIS (Internet Information Services) will be used to host and deliver web content efficiently.*
* ***Backup Software:*** *Automatic backup tools will be configured for both the website and database to ensure quick recovery in case of data loss.*
* ***Security Software:*** *Anti-malware and intrusion detection tools will be deployed to protect sensitive user information and prevent unauthorized access.*
* ***Payment Gateway Integration:*** *Secure API integration with a trusted payment processor to handle financial transactions and ensure PCI compliance.*

***Infrastructure Requirements***

* ***Hosting Environment:*** *The system will be hosted in a secure data center with controlled physical and digital access.*
* ***Geographic Accessibility:*** *The DriverPass website will be accessible across the United States with optimized server placement for performance and low latency.*
* ***Scalability:*** *The infrastructure will support increased user load as the company grows, allowing easy scaling of server resources and database capacity.*
* ***Redundancy:*** *Backup servers or cloud-based failover solutions will be implemented to minimize downtime and maintain continuous service availability.*