# CS 255 System Design Document Template

This template lays out all the different sections that you need to complete for Project Two. Each section has guidance to prompt your thinking. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client’s needs. There is no required length for the final document. Instead the goal is to complete each section based on what your client’s needs are. Remove this note when you are finished, and replace all bracketed text with the relevant information.

## UML Diagrams

### UML Use Case Diagram

A diagram of a driver pass

AI-generated content may be incorrect.

### UML Activity Diagrams

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

A diagram of a student process

AI-generated content may be incorrect.

### UML Sequence Diagram

A diagram of a program

AI-generated content may be incorrect.

### UML Class Diagram

A close-up of a diagram

AI-generated content may be incorrect.

## Technical Requirements

*Hardware Requirements*

* *The system must run on standard web servers with at least 8 GB RAM, quad-core processors, and scalable storage to support growing student data.*
* *Local workstations for administrators and instructors should be able to run modern browsers with at least 4 GB RAM and internet connectivity.*

*Software Requirements*

* *The DriverPass system will be web-based, accessible via common browsers (Chrome, Firefox, Edge, Safari).*
* *Backend services should use a secure database system (e.g., MySQL or PostgreSQL) for storing student information, lesson reservations, and exam results.*
* *The application should integrate with external payment gateways and email/SMS APIs for processing payments and sending confirmations.*

*Tools and Frameworks*

* *A web development framework (such as Django, Spring Boot, or ASP.NET) will provide authentication, scheduling, and reporting features.*
* *A front-end framework (such as React or Angular) ensures the user interface is responsive and mobile-friendly.*
* *Security tools like encryption libraries and SSL/TLS certificates must be used to safeguard user logins and transactions.*

*Infrastructure Requirements*

* *The system should be hosted on a cloud service (e.g., AWS, Azure, or Google Cloud) to provide scalability, uptime guarantees, and regular backups.*
* *Load balancing and redundancy should be implemented to handle peak demand, such as student registration periods.*
* *Data backup and recovery plans must be in place, with at least daily backups stored securely.*