# 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 person's process

AI-generated content may be incorrect.

### UML Activity Diagrams

*[You were asked to choose* ***two*** *use cases and create* ***two*** *activity diagrams, one for each use case. Please insert* ***both*** *of your activity diagrams here. Check to make sure that you included appropriate components and symbols and that your design meets the client’s needs.]*

*A screenshot of a computer

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

AI-generated content may be incorrect.*

### UML Sequence Diagram

*[You were asked to create a sequence diagram based on* ***one*** *of the use cases you chose. Please insert your sequence diagram here. Check to make sure that you included appropriate components and symbols and that your design meets the client’s needs.]*

*A diagram of a study material

AI-generated content may be incorrect.*

### UML Class Diagram

A diagram of a computer

AI-generated content may be incorrect.

## Technical Requirements

*Functional Requirements:*

* The system shall allow users to register, book, modify, and cancel any appointments.
* The system shall allow users to login via role-based access, providing different permissions for admins, secretaries, students, and instructors.
* The system shall provide account recovery/password reset in case students forget their credentials.
* The system shall integrate payment processing so students can purchase different training packages.
* The system shall allow administrators to disable/enable packages when necessary
* The system shall allow administrators to review the logs and see who made changes to the system.
* The system shall update training materials regularly to maintain compliance with DMV protocols and regulations in real time.
* The system shall allow the driving instructors to check student schedules and upload feedback and progress reports.

Nonfunctional Requirements:

* Performance Requirements:
* The system needs to be web-based as it can be hosted via cloud to further support cross-platform.
* The system needs to be able to withstand multiple users accessing the webpage without crashing (can be supported by an Elastic load balancer over multiple instances– deploys traffic to other instances to stabilize the system)
* Response time must be 1 second or less.
* Platform Expectations:
* This system hosted on cloud services (can be accessed from any OS that has access to cloud)
* The system needs to be accessible for all different devices – Laptop/desktop, smart phone, tablet, etc.
* A database will beneficial to properly store user login and authentication, as well as any packages or modules.
* Security:
* Role-based access for user enhances authentication by adding an extra layer of security.
* Users need to be able to reset their password from their end.
* Log tracking is crucial to review who and what changes were made to the system.