# 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

*[In Module Six, you were asked to complete a use case diagram based on your system design. If you would like to make any adjustments to your diagram, please do so. Please insert your use case 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 software company

Description automatically generated*

### 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 computer screen shot of a diagram

Description automatically generated

A screenshot of a computer screen

Description automatically generated

### 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 customer

Description automatically generated

### UML Class Diagram

*[You were asked to create a class diagram based on the different classes and attributes needed for your system design. You are* ***not*** *required to include methods, but you may if you wish. Please insert your class diagram here. Check to make sure that you included appropriate components and symbols and that your design meets the client’s requirements.]*

A diagram of a company

Description automatically generated

## Technical Requirements

*[Based on the diagrams you have created, describe the technical requirements of your system. These requirements should address the required hardware, software, tools, and infrastructure necessary for your system design.]*

1. **User Management:**
   * The system should support user login and profile management.
   * Users can be categorized as Customers, Drivers, Secretaries, or System Admins, with specific roles and permissions.
2. **Reservation System:**
   * Customers should be able to log into the system and select from various reservation options such as making a new reservation, modifying an existing reservation, or cancelling a reservation.
   * The system should provide the capability for customers to choose a training package and select a preferred date and time for the reservation.
   * The system must process reservation details and send confirmation to the customer.
3. **Training Package Management:**
   * The system requires a class to manage training packages, including attributes for package ID, description, and price, and methods to update package information.
4. **Driver Scheduling:**
   * Drivers need to have their schedules managed within the system, allowing for updates and assignment to reservations.
5. **Vehicle Management:**
   * The system must manage information about the vehicles used for training, including model, registration number, and related updates.
6. **Assignment Functionality:**
   * The Secretary class indicates a need for functionality to schedule lessons and assign drivers, which should be part of the system's capabilities.
7. **System Administration:**
   * The system must support administrative functions such as updating system settings and managing user accounts, specifically for System Admins.
8. **Database Integration:**
   * A back-end database is required to store and manage data related to users, reservations, training packages, and vehicles.
9. **Security Measures:**
   * The system should implement security measures to protect user data, especially for functions like password management and user account control.
10. **Notification System:**
    * The system must include a notification system to confirm actions taken by users, such as reservations being made, modified, or cancelled.
11. **Adaptability to DMV Updates:**
    * The system must be flexible to incorporate changes in compliance with DMV regulations.