# 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

Description automatically generated*

### UML Activity Diagrams

*A diagram of a product

Description automatically generated*

A diagram of a process

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### UML Sequence Diagram

*A diagram of a process

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### UML Class Diagram

*A screenshot of a computer program

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## Technical Requirements

The DriverPass system will need a strong and flexible setup to support its main features lesson scheduling, user accounts, and DMV rule updates. It will run on a cloud platform to keep the system reliable, secure, and able to grow as needed. Cloud servers will host the application, store user and lesson data in a database such as MySQL, and handle backups. The system will work on web browsers across desktops and mobile devices, supporting Windows, macOS, iOS, and Android. A stable internet connection will be needed to keep things running smoothly.

For the software, the system will use tools such as React.js or Angular for a clean and easy-to-use interface. On the backend, frameworks like Node.js or Python will handle the system's core tasks. Secure communication will be managed using HTTPS, while user logins will include password protection and optional multi-factor authentication. A notification service will send confirmation emails and updates to customers. To keep the system running well, tools will monitor performance, while automatic backups will protect against data loss.

The system will use role-based access control (RBAC) to manage permissions for users like customers, secretaries, instructors, and IT admins. Admins can update user accounts, lesson details, and training packages without needing a developer to make code changes. The system will also connect to DMV updates in real time, ensuring the training materials stay accurate and up to date. This design makes the system secure, reliable, and easy to use while meeting DriverPass’s goals.