# 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

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### UML Activity Diagrams

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### UML Sequence Diagram

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### UML Class Diagram

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## Technical Requirements

*The DriverPass system is designed to be intuitive and responsive, ensuring that both students and instructors can easily navigate and use its features. The platform needs to work efficiently across devices, prevent double-booking, and deliver real-time updates. Below are the core technical needs for the system:*

***Hardware and Infrastructure***

* *Hosted on a secure, cloud-based server environment to allow 24/7 access.*
* *Reliable internet connection required for both users and instructors.*
* *Scalable database infrastructure to support user growth and concurrent logins.*

***Software and Tools***

* *Web-based application built using modern front-end and back-end technologies (e.g., JavaScript frameworks, SQL/NoSQL database).*
* *Integrated with a third-party payment processor for secure transactions.*
* *Real-time data synchronization to handle scheduling and user activity.*

***Functional Requirements***

* *Students must be able to:*
  + *Create and manage their accounts.*
  + *Schedule and view driving lessons.*
  + *Take practice exams with immediate scoring and feedback.*
* *Instructors must:*
  + *Access lesson bookings assigned to them.*
  + *Mark lessons as complete.*
* *Admins need:*
  + *Access to manage users, lessons, and overall system activity.*
  + *Ability to update system settings and troubleshoot technical issues.*

***Nonfunctional Requirements***

* ***Security****: User accounts must be password-protected and encrypted; sensitive data must follow best practices for security and compliance.*
* ***Performance****: Pages should load in under two seconds even during peak usage.*
* ***Adaptability****: The system should work across modern browsers and mobile devices.*
* ***Availability****: Target uptime of 99.9% with backup and recovery protocols in place.*