# 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 network

Description automatically generated

### A diagram of a login Description automatically generatedUML Activity Diagrams

### *A diagram of a flowchart Description automatically generated*

### UML Sequence Diagram

*A diagram of a user reservation

Description automatically generated with medium confidence*

### UML Class Diagram

*A diagram of a program

Description automatically generated*

## Technical Requirements

*Since one of the requirements of the Driver Pass system is to be a web hosted application, a hardware requirement would be there would be a physical server to host the web application. These servers can be in the cloud as well. The network infrastructure should be able to securely transmit data between the web application and the server. Encryption protocols should be implemented such as TLS or SSL to ensure secure data exchange. The Driver Pass system should have a secure and reliable database to store information such as user details and reservation data. To improve performance, caching mechanisms should be implemented to optimize memory usage and reduce database load. An integrated development environment tool will be needed to code the Driver Pass application. Another software tool that will be needed to a system performance monitoring tool to track performance and perform system health checks. The Driver Pass system should also be hosted on the cloud which will provide minimal upkeep and technical problems. It can be hosted on the AWS cloud or Microsoft Azure.*