# CS 255 System Design Document Template

## UML Diagrams

### UML Use Case Diagram

A screenshot of a diagram

Description automatically generated

### UML Activity Diagrams

A diagram of a company

Description automatically generated

A diagram of a software project

Description automatically generated with medium confidence

### UML Sequence Diagram

A diagram of a diagram

Description automatically generated

### UML Class Diagram

A diagram of a driver pass class

Description automatically generated

## Technical Requirements

The technical requirements for this system are still somewhat abstract, considering the need for clarification of specific goals from the client (such as expansion timeline/planning, initial client base expectations, performance vs cost expectations, and other important factors). That being said, the minimum technical requirements as a starting point should include a virtual machine (cloud computing service, such as Amazon Web Services or the like) capable of handling the amount of users in the starting region at once, all logged on simultaneously, so as to plan for the worst case scenario. I would recommend to the client that we perform stress tests on the server to simulate this scenario.

As far as software is concerned, I would recommend a windows-based server product, as Microsoft products will likely have the most widely available customer support base in the market. This would be optimal for our client as they have expressed that they want to focus solely on the business, and they do not want to deal with system maintenance. The server software should be established using a website, offering an optional mobile application to the customer if they wish, at an extra cost. The website should be programmed such that it’s accessible from all common modern-day web browsers such as Chrome, Edge, Brave, Safari, and Firefox.

Furthermore, it should have a mobile device-specific page that customers can be re-routed to such that it appears in a different format optimal for mobile device viewing. As far as specific infrastructure is concerned for the virtual machine/server such as nonvolatile storage capacity, volatile memory, processor speed and thread/hyper-thread, and video processing requirements- it is impossible to determine these without further consultation with the customer. That being said, the customer and their clients will need reliable internet access, and computers capable of running a modern web browser, with enough storage space to store the required courses and tests, and enough processing power/volatile memory to view and interact with them.