# 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

Diagram

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Here is the Use Case Diagram. We can see two users depicted for the use cases. The driver pass user should be able to create lessons, browse instructors, or make practice tests. The driver pass owner/admin should have access to all accounts or data associated with driver pass, can download reports, and should have access to the backend databases.

### UML Activity Diagrams

Diagram

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Diagram

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Here, we have a couple activity diagrams. They depict what a couple of the user’s functions are. We have the admin/owner who will need access to everything data related. They will need access to all accounts to remove/add accounts, alter any data associated with DriverPass, and will need to be able to download reports from any device specified. The user also will need a few key functions. They will need to login, browse the available instructors, and then schedule a lesson with that selected instructor. They will also need the ability to create practice tests/lessons.

### UML Sequence Diagram

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Here we have a sequence diagram. This diagram labels all interactions between the main components of the system and the order they take place.

### UML Class Diagram

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Here is the UML class diagram. We can see that there are a few classes with specific attributes to them: User, Admin/Owner, and Instructor. Each of them has their own capabilities and directly relate to DriverPass. Meanwhile, Practice Tests, Lesson Scheduling, and Instructor Browser will inherit any attribute given to them by DriverPass.

## Technical Requirements

The system will require a few things before it is completed. First, we should talk about hardware. I would recommend having a cloud-based system. They are easier to manage and more cost effective as opposed to physical servers. The only downside to them would be having to shut down the application for maintenance, but it is a small price to pay when you look at how effective they are. You would obviously need a computer or some type of device, as well as an internet connection, if you are wanting to have the ability to download and view reports of the system. For security, it would be best to practice some sort of two-factor authentication to keep people from trying to break into someone else’s account. Each user should be given a unique authentication token that would allow for this to happen, and the password set by the user should obviously be case sensitive. Lastly, a platform for the system. The best platform for the system would have to be Linux. It is extremely easy to use and cost effective. If for some reason Linux doesn’t work out, Windows would probably be the next best option.