# CS 255 Business Requirements Document

## System Components and Design

### Purpose

*What is the purpose of this project? Who is the client and what do they want their system to be able to do?*

* The purpose of this project is to develop a comprehensive system for DriverPass that addresses the need for better driver training. The client, Liam, wants a system that enables online classes, practice tests, and on-the-road training for driving test preparation.

### System Background

*What does DriverPass want the system to do? What is the problem they want to fix? What are the different components needed for this system?*

* DriverPass aims to provide a solution to the high failure rate in driving tests by offering online classes, practice tests, and on-the-road training. The system needs components for online registration, lesson scheduling, user management, and integration with the DMV for up-to-date test materials.

### Objectives and Goals

*What should this system be able to do when it is completed? What measurable tasks need to be included in the system design to achieve this?*

* The system should facilitate online classes, practice tests, and driving lesson scheduling.
* Provide a user-friendly interface for customers, administrative staff, and IT administrators.
* Ensure real-time tracking of reservations, driver assignments, and customer progress.
* Integrate with the DMV to stay current with rules, policies, and sample questions.

## Requirements

### Nonfunctional Requirements

*In this section, you will detail the different nonfunctional requirements for the DriverPass system. You will need to think about the different things that the system needs to function properly.*

#### Performance Requirements

*What environments (web-based, application, etc.) does this system need to run in? How fast should the system run? How often should the system be updated?*

* The system needs to run in web-based environments.
* Fast response times are required, with minimal latency.
* Regular updates are needed to keep the system current with DMV regulations.

#### Platform Constraints

*What platforms (Windows, Unix, etc.) should the system run on? Does the back end require any tools, such as a database, to support this application?*

* The system should run on various platforms, including Windows and Unix.
* The backend requires a database for storing user data, reservations, and lesson information.

#### Accuracy and Precision

*How will you distinguish between different users?* *Is the input case-sensitive? When should the system inform the admin of a problem?*

* User input should be case-sensitive.
* The system should inform the admin of any issues promptly.

#### Adaptability

*Can you make changes to the user (add/remove/modify) without changing code? How will the system adapt to platform updates? What type of access does the IT admin need?*

* Changes to user data should be possible without changing the code.
* The system should adapt to platform updates seamlessly.
* The IT admin needs full access for system modifications.

#### Security

*What is required for the user to log in? How can you secure the connection or the data exchange between the client and the server? What should happen to the account if there is a “brute force” hacking attempt? What happens if the user forgets their password?*

* User login requires a secure authentication process.
* Data exchange between the client and server should be encrypted.
* Accounts should be locked after a certain number of unsuccessful login attempts.
* Password reset functionality should be available for users who forget their passwords.

### Functional Requirements

*Using the information from the scenario, think about the different functions the system needs to provide. Each of your bullets should start with “The system shall . . .” For example, one functional requirement might be, “The system shall validate user credentials when logging in.”*

* The system shall validate user credentials when logging in.
* The system shall allow users to make online reservations for driving lessons.
* The system shall track and display user progress, including completed tests and driving lessons.
* The system shall integrate with the DMV to receive updates on regulations and test materials.

### User Interface

*What are the needs of the interface? Who are the different users for this interface? What will each user need to be able to do through the interface? How will the user interact with the interface (mobile, browser, etc.)?*

* The interface should cater to different users, including customers, administrative staff, and IT administrators.
* Users should be able to interact with the interface through various devices, including mobile and browsers.
* Functionality should include online registration, lesson scheduling, and progress tracking.

### Assumptions

*What things were not specifically addressed in your design above? What assumptions are you making in your design about the users or the technology they have?*

* The design assumes that users have basic technology literacy.
* The internet connectivity of users is assumed to be stable for online interactions.

### Limitations

*Any system you build will naturally have limitations. What limitations do you see in your system design? What limitations do you have as far as resources, time, budget, or technology?*

* Limitations include resource constraints, including time and budget.
* Customization of packages might require future updates and involvement of developers.

### Gantt Chart

*Please include a screenshot of the GANTT chart that you created with Lucidchart. Be sure to check that it meets the plan described by the characters in the interview.*

A screenshot of a computer screen

Description automatically generated