# CS 255 Business Requirements Document

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## 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?*

* This project aims to develop a system for DriverPass so they can train student drivers for their driving test at the DMV after noticing a void in the market for this training. The client, Liam, wants the system to enable him to create online classes, practice tests, and in-person driving training to prepare each student for a driving test. Liam wants the system to schedule online appointments and track reservations and user activities. Additionally, he wants remote access to the system from his computer or mobile device, allowing him to download the data to work on documents offline.

### 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’s system to enable them to provide comprehensive packages for online and in-person driving training.
* The system should allow them to sign up online and via the phone or in person from the company’s secretary.
* The system needs the ability to provide different packages with varying hours. Additionally, there needs to be a system to track reservations and cancellations in case of error to find the cause of the issue.
* Security and remote access are other key features, with varying access to the system for different employees and ability to reset passwords and block access, also allow the owner to access the system online from a PC or mobile and download and submit work from his device to the system.
* The system should be able to receive regular updates from the DMV to remain complaint with changing laws and regulations.

### 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?*

* DriverPass their system should enable their customers to access online classes and schedule driving lessons online or via the phone with their many packages.
* An administration system should be put in place, allowing the owner to set permissions for each user to reset passwords and block access.
* A remote access system must be implemented for DriverPass to enable remote system management, uploading, and downloading documents.
* A notification system should be set up to provide regular updates from the DMV about changes in laws and regulations.

## 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 should be on a web-based platform.
* The system should be seamless for users experience with fast access to any website feature.
* Seamless integration with DMV updates to provide updated rules and 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?*

* Database will be needed for user account information, administrative accounts, appointments, and DMV updates.
* The system should be able to run on Windows, Linux, IOS, and Android.
* The system needs to be optimized for mobile to ensure accessibility and usability on smartphones and tablets.

#### 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?*

* The system should have unique email addresses.
* Passwords should be case sensitive and require a number and a unique letter.
* The system should inform the admin of multiple failed attempts to login and if any administrative account information changes.

#### 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?*

* Managing user information should be able to modify without changing the code.
* Deleting appointments or modifying should also be down without changing the code.
* The IT administrator should have full access to the system and managing users and other security features.

#### 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?*

* Users should be required to use their unique username and password to login with two factor authentication with user of their email with the option to remember device for 60 days.
* Data exchange between the client and server should be encrypted.
* If an attempt is made to hack a user’s account, it should be locked for 5 hours, and a notification sent to the administrator to investigate.
* The user should be able to reset their password, should be able to click a button and have a temporary password sent to their email address and require them to change their password after logging in.

### 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 onto the website.
* The system shall allow users to schedule appointments for driving lessons.
* The system shall allow users to sign up for online classes,
* The system shall track user activity.
* The system shall allow administrators to have full access to the system and accounts.
* The system shall allow users to access the system from Windows, Linux, IOS, and Android.

### 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 User interface will be different between user and administrator.
* Users will be able to schedule an appointment from a calendar and open time slots.
* Users will be able to sign up for online classes and navigate to courses.
* Administrators should have access to notifications, appointments, and modifying account information or appointments.
* Both users will be able to easily navigate the website with a responsive interface.

### 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 user will be familiar with using a website and not need explanation.
* The user will have internet to access the website and features provided.

### 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?*

* There may be a limit on skilled developers to build functionality for multiple platforms.
* Strict timeline may limit the ability to implement features requested.
* Budget constraints might affect investment in additional resources needed to complete the project.

### Gantt Chart

A close-up of a chart

Description automatically generated