# CS 255 Business Requirements Document

## System Components and Design

### Purpose

* The client aims to provide their customers with a program that assists them in passing their driver’s tests at DMVs.

### System Background

* DriverPass wants the system to create a smooth line of communication between customers and the business.
* DriverPass wants to develop a web application that allows them to provide online education and in-person driver classes.

### Objectives and Goals

* DriverPass should be able to allow customers to:
  + Purchase an offered package,
  + Create and alter reservations,
  + Take online classes and tests,
  + View feedback from instructors.
* DriverPass should also allow for administrative, maintenance, and secretarial accounts outside of customer accounts.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* DriverPass will need to function as a web-based application
* DriverPass should run smoothly with little to no lag
* DriverPass will be running 24/7
* DriverPass should be updated only when information is changed or submitted

Rationale: As DriverPass was requested to run off the web, it would be most efficient to develop the system as a web-base application. Because DriverPass is looking to support customers, ensuring that their experience is smooth and streamlined is mandatory. Therefore, latency should be minimized, and the server should always be running to support customers. As customers will be making reservations, the system should update only when new information is presented

#### Platform Constraints

* DriverPass will run on any operating system with a web browser application
* DriverPass will need a database server to store related tests, user information, and reports

Rationale: DriverPass needs to be easily accessible to its users, so ensuring that the application is usable on web browsers enables it to be used on any system with a web browser application. As a web-based application, none of the information required to function should be present on the user’s system, so a separate server will be needed to store all data.

#### Accuracy and Precision

* DriverPass will use a role-based system for users to differentiate levels of accessibility
* DriverPass will be case-sensitive for all input

Rationale: DriverPass will use roles to differentiate between users as assigning roles to users allows functionalities within the system to be easily divided between users. Allowing the system to differentiate between case allows for more security and precision which are important when dealing with the public.

#### Adaptability

* DriverPass will allow customers to modify their information
* DriverPass will send out notifications a week and 24 hours prior to platform updates
* DriverPass will allow the top administrator to add, remove, and modify user information
* DriverPass will allow IT administrators to modify and maintain the system
* DriverPass will allow secretarial administrators to make appointments for other users

Rationale: DriverPass will allow these users’ these functionalities as they are necessary for users to perform their desired functionalities. As this platform should allow users to design schedules around it, it is important that any time that the server is down that users are notified well in advance so to make proper adjustments

#### Security

* DriverPass will be case-sensitive for both user ID and passwords
* DriverPass will lock user accounts when more than 3 attempts are made to login
* DriverPass will use a multiple factor authentication system for all administrative type users
* DriverPass will use HTTPS

Rationale: DriverPass will use these security measures as case-sensitivity allows for more complex input thereby foiling hacking attempts, locking accounts blocks hackers from having sufficient attempts to access accounts, multiple factor authentication requires the accessor more information therefore complicating the process, and HTTPS will provide website security so that users can be confident they are accessing the correct portal.

### Functional Requirements

* DriverPass will validate user information upon accessing the application
* DriverPass will automate emails that send user information retrieval emails to information already present or related to a given user ID or email
* DriverPass will notify administrators of security problems when users fail to access their account more than three times
* DriverPass will notify administrators when DMV has updated their policies
* DriverPass will make reservations based upon user input
* DriverPass will display and grade tests taken by users
* DriverPass will display notes from instructors on their respective students’ screens
* DriverPass will reset a user’s information upon administrator request

Rationale: DriverPass will provide at least these functionalities to meet the desired function of the client. Without validating user information, no users can be differentiated and so the system cannot provide its expected service. Automating user information retrieval emails will allow the company to focus on providing human service where its needed rather than expend resources on a process that can be automated. Administrator’s will receive the above functionalities as they are important to maintaining a smooth user experience and proper instruction. As reservations for practice drives and tests are imperative to the system’s functionality, the system will provide users with their respective services to meet the desired functionality.

### User Interface

* The interface will allow mobility between pages
* The interface will be displayed within a browser and use a keyboard and mouse as inputs.
* Users will be able to see their information on the interface
* Teachers will see their students and appointments on their interface
* Customers will see their teacher’s notes, teacher’s photo, their photo, information, and test information
* IT administrators will be able to see user feedback and current issues being worked on
* Secretarial administrators will be able to search for all users
* The top administrator will be able to see any security issues as notified by the system

Rationale: To streamline the user experience, the user interface will adapt as stated above for the stated users so that only the information they require is presented. Mobility between pages makes it easier for user navigation, and keyboard and mouse are standard inputs for a computer.

### Assumptions

* DriverPass will not be developed for an individual application and made accessible on the web
* All users will have access to a web browser
* DriverPass will take care of server hosting and related fees
* The Gantt Chart is scheduled with the assumption that new features will not be introduced

Rationale: As DriverPass is looking to be made available over the internet, integrating it with the current web fits with the current paradigm of web applications. As DriverPass only asked for the development of the system, providing the servers required to run the application is expected of their party. The scheduling can only be made based on the thought that all material presented at the interview is conclusive and final.

### Limitations

* The system will manage resources in a manner that minimizes consumption and usage
* The system will be developed when required personnel are available

Rationale: Ensuring that the system runs as efficiently as possible is required to minimize the costs of running the application. As personnel are currently on vacation, they will only be obligated to work once they return from their leave.

### Gantt Chart

Diagram

Description automatically generated