# CS 255 Business Requirements Document

## System Components and Design

### Purpose

* The purpose is to create a system for DriverPass, a driver education company, that improves the driver learning process by providing online training and scheduling capabilities as well as enabling the staff to do their job whereever they are.

### System Background

* DriverPass is seeking a system that addresses the need for better driver training and fill a gap in the market.
* The new system will help them manage their driving training business by providing online and in-office capabilities for both customers and members of staff at DriverPass.
* The system will consist of a secure online portal for customers to register, schedule appointments, and access training materials as well as a user interface for company staff to perform their duties online or offline.

### Objectives and Goals

* The system will have the following online capabilities for the customers:
  + Register for online accounts
  + Purchase driver training packages
  + Take online training and practice tests
  + Make reservations for driving lessons
  + Amend or cancel their reservations
* The system will enable members of the staff to perform the following functions:
  + Online and offline access to view reports such as customer progress
  + See notifications from DMV on updates to policies, rules and questions.
  + Register customers for driving lessons and schedule appointments in-office.
  + Manage training packages available online

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system needs to handle 100 concurrent users (staff and customers)
* Latency of transactions should not exceed 5 seconds.
* User interface needs to be optimized for quick access from mobile devices

Rationale: Performance requirements impact the user experience and satisfaction. Given some customer will be using the system for extended periods of time for online learning or taking practice tests, latency must be low enough to provide a smooth and frustration-free experience. In addition, as there are 10 driver trainers, we can expect many customers scheduling appointments online in addition to using the online training material, therefore the system must be able to scale well as more users log in during peak hours.

#### Platform Constraints

* The system’s back-end should run on Cloud so that backup and security is taken care of by the cloud provider
* The user interface needs to be accessible from computers with different browsers, iOS and Android mobile devices

Rationale: Given the limited IT resources, most of the infrastructure maintenance needs to be outsourced to a managed service such as Cloud providers so the staff can focus on running the business. As customers and staff will use different devices, the user interface needs to be adaptable to their specific device and browser choices to avoid missing a significant segment of the customer base.

#### Accuracy and Precision

#### The system should be able to distinguish between different users based on their roles and permissions

Rationale: The owner needs broader access to have administrative control of all the accounts to reset passwords or block former employee accounts. Secretary will need to be able to schedule appointments on behalf of customers when they visit the office instead of using the online portal.

#### Adaptability

* Flexibility is needed for staff to disable available training packages
* Developers will be needed to add or remove modules

Rationale: Owner will need to be able to have some flexibility to control what the customers can sign up for online without requiring code changes especially to disable certain offerings if they are no longer valid.

#### Security

* Access is role based and some members of staff will have ability to reset passwords
* Changes are tracked for auditing purposes by staff
* Accounts should be locked after 5 unsuccessful attempts
* Customer self-service password reset functionality

Rationale: to protect system integrity and customer information, access control is critical. Due to limited number of staff, providing a self-service password reset capability for customers will reduce the toil of responding to repetitive forgotten password issues.

### Functional Requirements

* The system shall allow customers to create an account.
* The system shall allow customers to register for driving lessons by buying one of the offered packages.
* The system shall allow customers to create, amend, and cancel appointments.
* The system shall provide customers with access to online training materials and practice tests.
* The system shall allow DriverPass employees to manage appointments.
* The system shall allow DriverPass employees to track customer progress.
* The system shall allow DriverPass employees to generate reports and download for offline review.
* The system shall receive notifications from DMV in the event of updates to rules, policies and test questions.
* The system shall retrieve customer driving test status from the DMV database.

### User Interface

* The system shall have a user-friendly interface that is easy to navigate.
* The interface should be accessible from various devices, including desktops, laptops, tablets, and smartphones.
* The interface should display information clearly and concisely.
* The interface should provide feedback to the user when they perform an action.
* The interface needs to meet a baseline set of accessibility requirements for equitable user access.

### Assumptions

* It is assumed that all users will have access to a reliable internet connection.
* It is assumed that all users will have a basic understanding of how to use a computer and navigate a web browser.

### Limitations

* The system’s performance and scalability will be limited by budgets as it will run on Cloud and will be subject to billing limits and configuration.
* The system will only service customers in the serviceable region where trainers can reach customers.

### Gantt Chart

A screenshot of a computer screen

Description automatically generated