# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

* The purpose of this project is to provide high quality driver training system for DriverPass.
* Provide an online and in-person solution with online courses and practice tests to prepare customers for their upcoming license test.
* DriverPass system overall goal is to provide better training to individuals seeking to take their DMV license test.

### System Background

* The background of the proposed system is to provide a solution for the lack of training available for individuals seeking to pass their DMV driving tests by providing online and in-person solutions.
* The system should have different user roles to allow appropriate access to content based on the role of the user (admin, user, IT).
* The system should be able to handle online and offline access of data at anytime from anywhere.
* Customers should be able to make reservations online if vehicles are available and over the phone.
* The system should stay up to date with DMV laws and rule changes.

### Objectives and Goals

* The objectives of DriverPass system are to provide an enjoyable experience while providing driver training and reduce the frustrations of failing a driver license test.
* The completed program should allow customers to access up to date information retaining to their local DMV and access to testing materials and practice driving test reservations.
* The administrator should have access to data and be able to generate reports from anywhere at any time.
* The program must track the activity of each user and provide information regarding any changes to the administrator. Any changes made to scheduling must notify the administrator and update the vehicles availability so that other customers may schedule an appointment if made online.
* Packages should be provided for users to select for a more custom experience.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system should run web-based using a cloud-based service such as amazon web services.
* The system should run as fast as the cloud-based service can run to avoid user frustration and potential bugs in the system from time out situations on the client’s side.
* Regular updates should be performed as DMV rules and regulations may change as well as their testing material. As well as any updates for bugs that may be discovered.

#### Platform Constraints

* The system should run all systems as this will be a web-based system cross browser compatibility and cross device compatibility will need to be tested to ensure that this need is met.
* The back end will require a database to manage user information and reservation information, other data may require a database as well.
* The back end will require functionality to communicate to the front end and database.

#### Accuracy and Precision

* Distinguishing between users is a must. The system should incorporate case-sensitive input checking and same name checking to ensure that multiple users with the same name will not be created. The system may want to incorporate a unique ID system to accurately find users.
* The system should be able to distinguish between users quickly and accurately.
* The system should notify the administration of any issues as soon as possible to ensure problems are resolved quickly.

#### Adaptability

* The program should allow changes to users and users roles without touching any source code, implementation of user roles from features of cloud-based services will ensure the source code will not need modification for these actions.
* The system should adapt flawlessly to platform changes and updates without interruptions or source code changes.
* The IT administrator will need full access for the management of user accounts and issues such as password resets and locked accounts.

#### Security

* Login should require authentication optional two-step verification could be implemented.
* Encrypting data will secure data exchange between client and the server. AWS has plenty of options to ensure this such as WSS and HTTPS.
* A temporary account lock should be in place if a brute force is detected, the IT admin should be notified so resolutions can be done quickly.
* An automatic password reset function should be in place with an optional reach out to IT option if the user is still encountering issues.

### Functional Requirements

* The system shall allow administrators to access data from anywhere and at any time to download reports.
* The system shall allow customers to make driving lesson reservations with available cars or prompt the user with the in-office phone number.
* The system shall track user activity and send administrator notification of any schedule changes.
* The system shall handle password resets for users if they forget their password.
* The system shall offer packages for driving lessons with different options to the customers.
* The system shall manage the creation of new users.
* The system shall authenticate and verify user login and prompt the user for an additional code.

### User Interface

* The interface should change subject to user roles allowing high permissions roles to view more options within the interface.
* The user interface should have options for scheduling driving tests, taking practice online tests, reviewing testing materials. Viewing profile information and changing as needed.
* Liam should be able to access and manage data from the interface. As well as make schedule changes from the interface.
* The interface is web based and should adapt to any browser or mobile device screen size it may encounter.

### Assumptions

* It is assumed that the user has a stable internet connection and owns a computer or device.
* It is assumed that the users have normal computer experience and will be able to navigate through a standard website.
* It is assumed that the user wants and needs help with their driving exams.
* It is assumed the user is of the age to take a driving exam.

### Limitations

* Budget limitations may affect the cloud-based service that is chosen and security addons that may cost additional money may have to be declined and alternative solutions implemented.
* Time limitations may occur for unforeseen incidents such as sick days or vacations days.

### Gantt Chart

