# CS 255 Business Requirements Document

## System Components and Design

### Purpose

* DriverPass wants their system to be able to store data to take advantage of a void in the market when it comes to training students for their driving tests.
* Their system must be able to store information about clients and teachers.
* The purpose is to make profit and provide students with educational services related to driving tests through software and real-life meetings.

### System Background

* Online classes and practice tests.
* The system must allow the head of DriverPass to access data from anywhere, online, or offline.
* “For tracking, I need to make sure I know who made a reservation, who canceled it, who modified it last. All this must be clear in case something goes wrong. I want to be able to print an activity report and figure out who is responsible” (Liam).
* “Our customers need to be able to make reservations for driving lessons” (Liam).
* “We also need to be able to identify the driver the customer is scheduled to go out with, since we have many drivers and many cars. We must be able to track which user is matched up with a certain driver, time, and car” (Liam).
* Customers can pick from 3 packages.
* The problem is to fix a gap in the marketplace when it comes to driving instruction.
* This system needs a database to be linked to a front end.

### Objectives and Goals

* This system should be able to register users for in-person driving lessons. This would be done by creating a phone number where the user calls and inputs their information such as first and last name, address, state, etc. It should also have a pickup location where the customer wants to be picked up (and dropped off). The clients should be able to schedule appointments through this. The measurable tasks might include creating each of these processes through a database.
* This system should be able to store data in a database that’s accessible on and offline, though only available to change elements online. This can be done in measurable steps as you create the database.
* This system must be able to print activity reports and figure out who is responsible for certain things like an address change, for security reasons. This can be implemented through measurable tasks such as first creating a system to track what people do on the site, then a system to report if changes are made to the personal information of clients.
* This system must be able to allow users to make reservations for driving lessons. To do this, steps must be taken such as first setting up a database of all clients, then mapping them to individual times and dates based on their schedule. This system must also identify the driver, car, and time they go out.
* The system must have a notification system that updates a team whenever the DMV makes a rule change on driving lessons. To do this, the system must be in contact with DMV and be under surveillance so that someone who sees a notification can update the team. This should be a simple implementation such as signing up for an email list, then extracting important information from those emails.
* This system must run from the cloud. This could be accomplished by measurable steps such as simply creating a database which runs from the cloud. Liam also explains about a layout which can be implemented on the front-end of a website. This can be done in steps such as first designing, then creating the different blocks.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system should be able to handle multiple logins at the same time.
* The system should be able to run in web-based environments.
* The system should be able to run very fast to sustain user interest.
* The system should be updated frequently (every week or so) to keep up with modern technology and to prevent viruses or bugs within the system.

#### Platform Constraints

* The system should run on anything that has access to a web browser.
* The system should be coded in HTML or a similar language for website building.
* The system’s backend should be supported by a database of users and drivers to support the application.
* The system should have organizational tools such as a Microsoft Spreadsheet to organize dates and times of instructors, organize class times and grades of users (completion progress as well), and organize practice test dates and the score the user received on them.

#### Accuracy and Precision

* The system should differentiate between different users by their first and last name. In the case where both are the same, the system should differentiate between different users by the user’s address.
* The system should have input be case-sensitive.
* The system should inform the admin of a problem immediately whether through notification, email, text, or some other communication.

#### Adaptability

* The system should be able to change certain parts of the user’s information with the right authentication and permissions of the individual who’s changing it. This should be implemented and therefore no code needs to be changed.
* The system should be constantly updated to the latest software and therefore should adapt to platform updates with ease.
* The system should give the IT admin access to everything but the database of users. That access should only be given to customer support and the lead project manager.
* The system should require the user to call customer services to change certain parts of their information such as address.

#### Security

* The system should have a username and password, along with a two-factor authentication or biometrics system in place to secure the information of the users.
* The system should have encryption of the user’s data to ensure safety between the client and server.
* The system should lock the account out and have the user call customer services if there is an attempt at brute forcing the username and password (after 3-5 attempts at unlocking the account).
* The system should prompt the user to enter their email address or phone number which then provides them with a link or person to change/reset their password.
* The system should prompt the user to enter a password and username when creating an account, along with other information. The password will need to be 12 characters long, lowercase letters, uppercase letters, a special character, and numbers must be included.
* The system should verify the phone number given by the user during account creation.

### Functional Requirements

### User Interface

* The system shall have an interface which is clear and easy to understand, using bright colors and pictures, as well as text and buttons.
* The system shall allow users to click on buttons and view pages relating to the overall purpose of the website.
* The system shall allow users to set up dates, times, and places for both them and the drivers to go so that the user can engage in a lesson with the driving instructor.
* The system shall allow the user to interact with the interface through a browser.
* The system shall allow users to track their driving time with an instructor, see previous drives, see upcoming drives, and allow the user to take online classes and practice tests.

### Assumptions

* The system shall be used only for online classes, practice tests, or setting up in-person lessons with an instructor.
* The system should store user information and driving instructor information in a database.
* The system shall work on any device, so long as that device has internet and access to a browser, however the system shall look better on a computer than a mobile device. (The user has access to a computer or device with a browser and internet connection).
* The system shall validate user credentials when logging in.

### Limitations

* The system shall be limited to the three main actions listed above under assumptions.
* The system shall be low budget to start, as our company is just getting started.
* The system shall have enough resources to run seemingly infinitely if the system gains enough traction in the public financially.
* The system shall be up and running two months after this document is completed.
* The system shall be built using the latest technology and up-to-date software.