# CS 255 Business Requirements Document

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## System Components and Design

### Purpose

* DriverPass, the client for this project, would like to develop a system that provides online and in-person training for students looking to take and pass the driving test at the DMV. They would like their system to be a secure web-based application that offers online classes and practice tests. It will also provide a scheduling function to create appointments for in-person training. The application should be accessible from any computer or mobile device with an internet connection.

### System Background

* DriverPass wants to provide a system to customers trying to take and pass the driving test at the DMV. They see a gap in the market as far as availability of supplemental training courses to go along with the DMV driving test. They hope to fill this void with their highly specialized system.
* The system will be a web application based in the cloud to minimize physical hardware requirements and technical issues.
* The application will have secure access via a unique username and password and will allow the user to enter identifying information, enter credit card information, and schedule appointments for in-person training.
* The application will offer online courses and practice tests for the written exam.
* Administrators of the application will keep the material up to date by being connected to the DMV for critical updates.
* Administrators will have tracking functionality to monitor changes made to appointments, etc., and will be able to generate reports from this data.

### Objectives and Goals

* The layout of the interface should include:
  + User information with the following fields:
    - First name, last name, address, phone number, city, state, zip code, email address
  + Online test progress with the following information in a table format:
    - Test name, time taken, score, status (not taken, in progress, failed, passed)
  + Driver notes with the following information in table format
    - Lesson time, start hour, end hour, driver comments
  + Special needs
  + Driver and student photos
* The user should be able to select one of the following packages:
  + Package One: Six hours in car with a trainer
  + Package Two: Eight hours in car with a trainer and an in-person lesson on DMV rules and policies
  + Package Three: Twelve hours in car with a trainer, in-person lesson on DMV rules and policies, and access to online class with all content, material, and practice tests
* The user should be able to schedule appointments for in-car sessions to include:
  + Date of the appointment
  + 2-hour time window for the appointment
  + Pick-up/drop-off locations which should be the same
  + These appointments should correlate to a specific driver and car, each with proper availability.
* Other pages for the application:
  + Input form for customer information, credit card information, and scheduling appointments
  + Contact Us page
  + Means to contact the customer
* The completed application should also be connected to the DMV to receive updates on new rules, policies and sample questions.
* The completed application should also have a tracking functionality that would show changes made to appointments, etc., that can be queried and used to generate reports.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system should be a web-based application accessible from any computer or mobile device with an internet connection.
* The speed of the system should only be limited by the quality of the user’s own internet access.
* Updates will be provided to the client as needed. They should be infrequent and only for necessary maintenance of the system.

#### Platform Constraints

* The system will operate on a web-based platform in the cloud.
* All content needed to run the system will be maintained and backed up in the cloud.
* A database will be needed to hold user information and site content. This database should also store information about appointment scheduling that includes availability of drivers and cars.

#### Accuracy and Precision

* The login information should distinguish between different types of users up to the administrator level and only allow access based on the user’s role. This will include students, drivers, and administrative staff.
* Usernames and passwords will be unique and case sensitive.
* The system should inform the administrator of a problem when a password has been entered incorrectly after a specified number of times (three times is the standard).

#### Adaptability

* IT administrators need access to all user accounts to reset passwords and change user access. They should also be able to add, update, or delete users. The system should be able to adapt to this without changing code.
* IT administrators will be responsible for system updates and maintenance of the system. IT administrators should be able to update the system seamlessly without running into any coding issues.
* IT administrators will have access to disable packages for purchase offered to the user if they are no longer available. Adding packages will require more coding and will not be accessible to IT administrators.

#### Security

* Users must have unique usernames and passwords to login.
* Users should be able to automatically reset their passwords upon request.
* IT administrators should have access to reset passwords or block access to users who no longer need to access the system.
* Login information will be encrypted when it is sent from the client to the server for verification.
* Data sent between the client and the server will be encrypted for added security.
* Two-factor authentication may be implemented as an additional security measure to prevent or control hacking attempts.

### Functional Requirements

* The system shall register users and receive all pertinent information from the users as input.
* The system shall validate user credentials when logging in.
* The system shall allow users to make reservations for driving lessons which will be 2 hours in duration and will include scheduling a driver and a car for the same time slot.
* The system shall provide interactive online content to users including study and test materials.
* The system shall allow users to purchase packages that include specified numbers of driving lessons and access to online content.
* The system shall allow drivers to send feedback to the students.
* The system shall have a contact page for users to contact administrators or other staff within the company.
* The system shall allow the user to reset their password upon request.
* The system shall provide tracking of user changes to records in the system and provide an activity report of all changes.
* The system shall allow an administrator to download or export information to another software program such as Excel.
* The system shall be connected to the DMV for content updates and should provide notification of updates.

### User Interface

* The user will interact with the interface online or through a mobile device.
* The interface will allow the user to see, enter, and update identifying information. It will also show online test progress, driver notes, any special needs of the student, as well as photos of the student and the driver.
* Drivers will need to be able to access the interface in order to add any notes from driving lessons.
* Users will need to be able to request and schedule in-person lessons through the interface.
* Users should have access to any online content through the interface including tests and study materials.
* User should be able to contact administrators, drivers, or other staff through the interface.

### Assumptions

* Users will have internet access in order to use the system.
* The cloud will properly maintain the system and provide uninterrupted access to the system.
* The user will have the technical know-how to navigate an online application.

### Limitations

* The system will not function without internet access.
* Cloud storage costs money and may be subject to budget restrictions.
* The timeline to produce the system may limit the functionality that can be made available.

### Gantt Chart

