# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

* This project is for our client DriverPass. The purpose of this project is to provide driving students with enough training to obtain their drivers license. This project is filling a void between students and the department of motor vehicles (DMV).

### System Background

* The client wants to provide online access to the user for online classes and practice test.
* The client wants to provide on the-the-road training as well if desired.
* Users will be able to schedule appointments online or by calling the company.
* Users will be able to chose between 3 different packages with different features.
* Client should be able to enable and disable packages.
* There should be roles for student, trainer, secretary, admin (IT), and owner.
* Users should be able to view the reports on any device.
* Reports should be able to be downloaded.

### Objectives and Goals

The system will provide the users with the following functions:

* Make driving appointments
* Provide test and display the results
* Have driving notes from the previous drives with the instructor
* A fill in section for the user to complete

Other goals include:

* Tracking of who made changes in the system
* Automated updates from the DMV

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system should be able to run on a web-based application or a mobile application.
* The system should be updated anytime a change is made to the layout or if there are updates from the DMV.
* The system should be run off the web preferably over the cloud.

Rationale: The speed of the system should be dependent upon the cloud-based server that is chosen. The system should update if there are major changes to the layout or new information is provided. The system should update quickly within real time to account for cancelations and new driving times.

#### Platform Constraints

* There is no preference on the platform the system should run on.
* The back end should be taken care of by the chosen cloud provider.
* A backup database should be kept in case the client wants to print out information.

Rationale: The client wants to focus on the business aspect of the company and needs a cloud provider that handles the backup. No platform preference is provided, as long as it is accessible through web-based applications and mobile phones.

#### Accuracy and Precision

* Usernames should be unique to each user; usernames are not case sensitive.
* Users passwords are created by the users and they are case sensitive.
* The system should identify between the different type of users.
* A reset password function should be available to the user with a link sent to the users email address to reset the password.
* The system should notify the admin if multiple login attempts fail for the user and they email request has been sent multiple times.

Rationale: The system should distinguish between the different types of users based on username. If too many attempts are to the same account without access and multiple emails have been sent without response, then the admin should be notified, and they can contact the user directly.

#### Adaptability

* Each user should a specific profile that is able to be created and removed without changing the code.
* Each profile should have information fields that are able to be edited by the user or the admin.
* The system should easily be updated based on the chosen platform.
* IT admin needs access to all the user profiles as well as the capability to maintain and modify the system.

Rationale: The IT admin should be able to modify the system in case there are new features added or if they want to disable certain features as well. The code for each profile should be the same but the IT admin will be able to change roles for each user as well as the owner.

#### Security

* Each user should have a username unique to each user with the password provided by the user.
* The cloud-based provider should be responsible for the security of the system.
* If the user forgets their password, they can submit for a reset password which will send a link to the users email account to reset the password.
* The cloud-based provider should be responsible for the exchange of information within the system.
* The cloud should only allow access based on the user role, if they are not a specific role then they can only access a limited amount of information.

Rationale: The client does not want to be responsible for the backup and security of the system, they want to focus on the business aspect of the company. The cloud server should only provide access to those with the right role and each role is allowed a limited access. Security should be good because the user’s payment information is stored within the system. A limited number of logins needs to be considered before locking the account and requiring a reset password.

### Functional Requirements

* The system shall validate user credentials when logging in.
* The system shall provide a “reset password” if the user forgets their password.
* The system shall provide the customer with the ability to select packages.
* The system shall provide the customer with the ability to modify their profile, including update name, address, photo, payment options, pickup location, pickup time, and etc.
* The system shall provide the customer with the ability to schedule or cancel a driving session.
* The system shall display the user test results and progress.
* The system shall download or print reports for the owner.
* The system shall provide the customer with the choice between the different packages.

### User Interface

* The interface display screen should be able to work as a touch screen and with a mouse accessed through mobile and web browser.
* The interface will display online test progress, user information, previous diving notes, any special needs for the user, student photo, trainer photo, driving appointments, and packages.
* The student user should be able to click on a box with the following features:
  + Student Photo: input a photo one themselves
  + Information: Review the information and update or notify DriverPass of any changes that need to be made.
  + Online Test Progress: User should be able to see results from previous test and see the progress towards another test. The test should have a status to each one.
  + Driver notes: Users should be able to review driving notes.
  + Driving appointments: should display the driving appointments available and the ones scheduled by the user. User should be able to schedule or remove a driving appointment.
  + Packages: Should display the 3 different types of driving packages that the user can select.
* The trainer user should be able to add driving notes for any student they are responsible for.
* The trainer user should be able to update their own photo.
* The secretary should be able to schedule a driving appointment for a student user.
* The admin and secretary user should be able to change student user information as well as student user photo.
* The admin should be able to change roles of user or remove users if needed.

Rationale: The user interface will be accessed through mobile and web, therefore touch screen is needed as well as a mouse operation. Different type of users need access to different portions of the site, and they should be able to update necessary information.

### Assumptions

* The cloud-based server has security and backup that is needed for the design of the system.
* The platform that is used is easily updatable and capable of viewing on all web-based applications and mobile devices.
* The budget will be enough to design the entire project and deliver all the desirables for the client.
* There are enough project members to complete the project on time.
* The program that is developed is easily understandable and adaptable for the IT admin.

Rationale: The cloud-based platform that is provided should provide all the necessary backup and security for the system. The developing team is expected to deliver the product within budget and on time.

### Limitations

* The system should handle the total amount of users at any given time.
* There are only 10 cars that are currently available.
* The driving sessions are 2-hour periods.
* The trainers do not work 24 hours a day.
* The system should reflect real time changes.

Rationale: There is only 10 cars available and the trainers do not work 24 hours a day so there is limitations on when the driving times are available. The system should be able to handle to total amount of users at a given time if all of them are signing up at the same time or they are taking test around the same time. The system needs to reflect real time changes without having to refresh, this would provide trainers and students with up to the last minutes changes in case of emergency.

### Gantt Chart