# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

*What is the purpose of this project? Who is the client and what do they want their system to be able to do?*

* Client: DriverPass
* Purpose: To assist people to pass their DMV Driving Tests through the taking of online classes and practice tests, as well as optional on-the-road training.

### System Background

*What does DriverPass want the system to do? What is the problem they want to fix? What are the different components needed for this system?*

* Access, modify, and update information online, as well as download offline reports.
* Must have different levels of security: employees have limited access, while upper management can have full access to reset account or block previous-employee access.
* System must be able to let users create reservations for driving lessons: each lesson is two hours; users must be able to specify time and day for reservation. Once user has booked their driving lesson, the system must be able to match a trainer and a vehicle to the user.
* 3 Packages for user to choose from:

1. Six hours in car with trainer. (3 – 2 hour driving lessons)
2. Eight hours in car with trainer, and one in-person lesson to explain DMV rules and policies. (4 – 2 hour driving lessons)
3. Twelve hours in car with trainer, one in-person lesson to explain DMV rules and policies, plus access to online class with access to all material and content to review. This also includes practice tests. (6 – 2 hour driving lessons).

* Package registration must be able to be turned on and off depending on number of customers or management override.
* System must be able to allow users to reset their password
* System must be able to update information, to keep the procedures in compliance with the DMV
* System must be able to store database information in the cloud and run on a web browser.

### Objectives and Goals

*What should this system be able to do when it is completed? What measurable tasks need to be included in the system design to achieve this?*

* Upon completion, the system should be able to allow individual users, as well as DriverPass employees to make reservations for their driving lessons specifying a date and time, as well as purchase 1 of the 3 packages. There must be access to a database that stores the user information, allowing password reset from the user and management of DriverPass. Online, the system should be able to add, modify, and delete reservations. Offline reports need to be able to produce a list of who has changed user information, as well as all reservations that have been made, and which trainers and vehicles were reserved. The system must be able to allow specific module updates to stay within DMV compliance.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

*What environments (web-based, application, etc.) does this system need to run in? How fast should the system run? How often should the system be updated?*

* This environment will be web-based.
* The system must load within a 2 second threshold.
* The system must allow content updates every few months, with minor tweaks and updates every few weeks.

#### Platform Constraints

*What platforms (Windows, Unix, etc.) should the system run on? Does the back end require any tools, such as a database, to support this application?*

* We will be using ASP.NET for our platform framework.
* We will need a database to hold customer information, as well as module content for the application.

#### Accuracy and Precision

*How will you distinguish between different users?* *Is the input case-sensitive? When should the system inform the admin of a problem?*

* Each user must have individual log in credentials.
* The input for usernames will not be case-sensitive, but the passwords must be case-sensitive.
* If system error occurs, the admin should be notified immediately.

#### Adaptability

*Can you make changes to the user (add/remove/modify) without changing code? How will the system adapt to platform updates? What type of access does the IT admin need?*

* Encapsulate the data. Management must be able to add/remove/modify users without modifying the data structure.
* System will update between the hours of 2 a.m. and 6 a.m. and will notify users and admin 48 hours in advance if update will take longer than 4 hours.

#### Security

*What is required for the user to log in? How can you secure the connection or the data exchange between the client and the server? What should happen to the account if there is a “brute force” hacking attempt? What happens if the user forgets their password?*

* User must have username and password to log in.
* User must pass CAPTCHA to log in their first time.
* SSL will be implemented to ensure secure connection of data exchange between client and server.
* User accounts will be locked if password is entered incorrectly 3 times within 24 hours.
* Users must contact Admin through phone or email to have their accounts unlocked.
* Password reset can be initiated through a link to user’s email, or through Admin.

### Functional Requirements

*Using the information from the scenario, think about the different functions the system needs to provide. Each of your bullets should start with “The system shall . . .” For example, one functional requirement might be, “The system shall validate user credentials when logging in.”*

* The system shall validate user credentials when logging in.
* The system shall display module information on splash screen.
* The system shall allow users to set appointments for driving instructions.
* The system shall allow admin to update content and reset user passwords.

### User Interface

*What are the needs of the interface? Who are the different users for this interface? What will each user need to be able to do through the interface? How will the user interact with the interface (mobile, browser, etc.)?*

* The interface shall have learning module information.
* The interface will need different interfaces for different classes of users, such as customer, admin, IT.
* Users will be able to access learning modules and appointment scheduler.
* Admin will be able to access module editor, appointment scheduler, and user information reset.
* IT will be able to access all of Admin.

### Assumptions

*What things were not specifically addressed in your design above? What assumptions are you making in your design about the users or the technology they have?*

* Assumptions made include client access to SSL website encryption, as well as ASP.NET platform framework.
* Assumptions also include admin will be able to update content information, having it set in specific extensions able to be opened by all users.

### Limitations

*Any system you build will naturally have limitations. What limitations do you see in your system design? What limitations do you have as far as resources, time, budget, or technology?*

* Limitations will include access to DMV information to update learning content.
* Access to server with database for user information and learning module content.
* Client currently has limited staff to continually update system.

### Gantt Chart

*Please include a screenshot of the GANTT chart that you created with Lucidchart. Be sure to check that it meets the plan described by the characters in the interview.*

