# 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?*

* The purpose of this project is to develop a complete system for DriverPass, which aims to provide improved driver training and address the gap in the market for better driver training solutions.
* DriverPass hopes to increase DMV driving test pass rates.
* The system will offer online and on-the-road training to ensure high-quality additional instruction to meet customer needs.

### 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?*

* DriverPass identified a significant gap in the market for effective driver training. Many people fail their driving tests at the DMV due to a lack of training and practice.
* There is a need for better training methods that can help students pass their driving tests with confidence. DriverPass aims to provide a comprehensive training program that includes both online and in-person elements.
* This system will offer accessible training options to improve students' skills and increase their chances of passing the DMV driving tests.

### 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?*

* Provide Online Training and On-the-Road Training
* Enable Downloads of Reports/Data
* Have User Accounts with Password Reset
* Allow Reservation Creation/Update/Deletion by Customer
* Track Drivers, Vehicles and Times
* Manage Training Packages
* Link with DMV for Relevant Updates
* Monitor Online Test Progress
* Have Input Forms and Contact Pages on Website

## Requirements

### Nonfunctional Requirements

*In this section, you will detail the different nonfunctional requirements for the DriverPass system. You will need to think about the different things that the system needs to function properly.*

#### 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 system should run in a web-based system accessible from any device with internet access: desktop, tablet or phone. The system needs to run without lag time so that students do not get frustrated. The system should be updated whenever Windows Microsoft updates are available and also whenever the DMV has new or changed information.

#### 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?*

* The system should run on Windows and will require a database management system like mySQL to store user, scheduling and test data.

#### 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?*

* Users should be distinguished by their usernames. Usernames should be case-sensitive and the system should notify admin if an account is being locked for failed password attempts. It should also inform admin if there is a suspected security threat or a system error.

#### 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?*

* The system should adapt to weekly platform updates received from Microsoft. The DriversPass system should be able to download and install updates as they are created by Microsoft.
* Administrators and IT Officers should have access to a backend interface that allows them to edit user account information without code.
* IT admin needs access to security and maintenance, system logs and monitoring tools

#### 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?*

* To login, users should provide username and password and complete a CAPTCHA.
* Users should authenticate their account through email verification.
* The account should lock for 30 minutes after 3 failed login attempts.
* The user can reset their password by following a link in their provided email.

### 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 include online classes and practice tests for students*
* *The system shall facilitate scheduling of On-the-Road Training*
* *The system shall allow access to interface from any computer or mobile device*
* *The system shall allow access to download reports for offline use (for administrator)*
* *The system shall have different access levels for unique roles (students, administrator, driver)*
* *The system shall have access for the administrator to manage accounts or block access.*
* *The system shall allow customers to make, modify, and cancel reservations for driving lessons online.*
* *The system shall track the scheduling of driver, student, assigned car, and time.*
* *The system shall have three packages with different training hours and features for customers to choose from.*
* *The system shall collect customer information (name, address, phone, credit card details, pickup, drop-off locations etc.) during registration.*
* *The system shall connect with the DMV for updates and notify administrator.*
* *The system shall show the progress of online tests.*
* *The system shall contain input forms for student information*
* *The system shall have a contact page*
* *The system shall have password reset built into the login*

### 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 users and needs:

* Students (via mobile, browser, desktop)
  + View packages and book
  + Access to make/change/delete reservations
  + Access to study materials and practice tests
  + Access to enter personal details into input forms
  + Access to reset account password
* Administrator (via browser, desktop, mobile)
  + Access to all customer accounts for management
  + Access to employee accounts for blocking former employees
  + Access to system reports for offline use
* IT Officer (via browser, desktop, mobile)
  + Backend access for maintenance and monitoring of the system
* Secretary (via browser, desktop, mobile)
  + Access to make/change/delete reservations for customers

### 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?*

* Internet access–We are making assumptions about the students ability to access an online resource and that the employees will also have consistent high speed access.
* Maintenance–We are assuming that we have enough clients to be manageable for one IT Officer to be able to maintain the system.

### 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?*

* Budget–Although it hasn’t been expressed, creation of a system costs money and we will be limited to the scope and scale of the system by what we can afford to build.
* Users technological skills–Since this is an online system, we are requiring a certain amount of tech savvy to operate within the system.
* Time–building a system takes time and especially features like integration with the DMV may take considerable time to create a workable product.
* Internet–although some system reports can be downloaded for use offline by administrators, for customers this system does not function offline.

### 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.*

