# 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?*

* DriverPass wants to provide driver training online and in person. The client wants to implement online training and practice tests and in-person driver training to help increase the pass rate of driver tests at the DMV.

### 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 wants a cloud-based database that stores customer information related to the services provided. This includes the UI for each customer that has information about course progress, test taken, test not taken, and test status passed, failed, or not taken.
* The database should include all information for in-person driving lessons. Including location pick up and drop off.
* Lastly, they want the database to have access to the DMV driver training information. If there are updates to the driver training they want to receive an alert so training material can be updated.

### 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?*

* Users will be able to make an account and gain access to DriverPass
* Users will be able to schedule an in-person training package
* Users will be able to complete online training or practice tests
* Users will be able to access study material offline
* Users will be able to see test progress
  + Completed
    - Pass or Fail with a grade
  + In progress
  + Not taken
* After scheduling in-person training the user will be able to see
  + Date of upcoming training
  + Start and end time
  + Driver Notes from previous lessons

## 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?*

* The system will be cloud-based so all customer needs will be completed through a web browser.
* The system should have the bandwidth for multiple users to have access to DriverPass without slowing down the user's experience.
* The system should only be updated when new features are added or experience breaking bugs. When there are no new features a scheduled maintenance once a month would give a chance to fix any small bugs and to test the system.

#### 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 is web-based and will run on a browser such as Chrome, Safari, Edge, or any other Chromium-based browser.
* The backend will have a database to store relevant information.

#### 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?*

* To distinguish users each user should be assigned a unique id that is attached to their account. This number is only accessible by system admins.
* All username and password entries will be case-sensitive.
* All errors should be stored in a log and a notification sent to admins. There should also be a way for users to submit bugs or issues.

#### 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?*

* All users should be able to be edited, removed, or added with changes to the code.
* The IT admins will have access to modify all user-related information and accounts. Including changing passwords, and adding and removing users.
* If the platform update does not cause any issues then any quality-of-life changes quill be done on schedule maintenance. If platform changes require an update we should no before and can plan another scheduled downtime for an update.

#### 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?*

* When logging in admins and users will be required to enter their case-sensitive username and password. Admins will be required to have two-factor authentication. This option will be recommended to users but not required.
* For combat “brute force” attacks there will be a limit of 5 attempts before the account will be locked and require a change of password.
* If a user forgets there password they will be able to request a new password. An email with a link and instructions will be sent to the email on file.

### 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.”*

* This system shall validate user credentials when logging in.
* This system shall allow users to request a new password.
* This system shall verify user information
  + First and Last name, address, phone number, and payment info
* This system shall give users a selection of 3 training packages.
* This system shall give admins the ability to disable packages that are unavailable
* This system shall show exam progress and grades.
* This system shall give access to study materials offline.
* This system shall display driver notes from training.
* This system shall display lesson start and end times.

### 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 user should be able to interact with the user interface from a browser or mobile browser
* The user should be able to update their information, name phone number address, and payment
* The users need to be able to take practice tests, online training, and book driver training.
* Trainers need to be able to update the driver notes for each of their students.
* Admins need to be able to update user information and package availability

### 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?*

* The system will be available 24/7
* The DMV training information will always be up to date
* There is no strict budget so everything should be covered

### 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?*

* Access to the DMV database will be difficult
* The timeline is 5 months. There is a lot that needs to be completed in the timeframe

### Gantt Chart

