# CS 255 Business Requirements Document Template

Complete this template by replacing the bracketed text with the relevant information.

This template lays out all the different sections that you need to complete for Project One. Each section has guiding questions to prompt your thinking. These questions are meant to guide your initial responses to each area. You are encouraged to go beyond these questions using what you have learned in your readings. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client’s needs. There is no required length for the final document. Instead, the goal is to complete each section based on your client’s needs.

**Tip:** You should respond in a bulleted list for each section. This will make your thoughts easier to reference when you move into the design phase for Project Two. One starter bullet has been provided for you in each section, but you will need to add more.

## 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 was created to help customers pass their driving tests. They want their product to provide a place for online classes and tests as well as provide booking for in person driving.

### 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 to be able to access data at all times as well as download information to work on at home. Ian wants access to all the accounts for security. They need a reservation system for the customers to know when they want to take lessons as well as which driver they have requested. Some of the aspects requested will need a developer or system analyst to help adjust modules.

### 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?*

* When the system is completed it needs to be able to show customers their progress including what they have and haven’t done or started. There needs to be options to set up reservations for their in person driving, including the driver and car they request as well as their pickup location. It needs to be a web based program that has backups and security already taken care of. There needs to be some sort of notification system linked to the DMV to let DriverPass know of new or updated tests and requirements.

## 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 needs to run in a web-based environment hosted on the cloud. It needs to be able to handle many simultaneous users and have a quick response time of 2 seconds or less for quick booking and data access. The system needs to be updated every time the DMV updates or adds rules to their policy.

#### 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?*

* This will be hosted on a cloud system that won't have any specific platform constraints. It just needs to support web access. The back end will need some sort of SQL database to store the user data such as reservations or training progress. It will require tools for cloud management and security as well.

#### 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 will be distinguished by account credentials. These accounts will have role-based access to differentiate between admins and customers. Passwords will be case sensitive for security purposes but account usernames will not be. The system will either have dashboard alerts or send emails to the admin account in the event of duplicate reservations that might have gone through at the same time or failed DMV updates.

#### 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?*

* User changes will be made through an admin interface that will not require changing the code. The system will adapt to certain platform updates that will need to be approved and monitored by the IT admin. The IT admin will need full access to manage users, roles, and system settings. This IT admin account will require a secure admin with a possible two-factor authentication to ensure security of the system.

#### 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?*

* Users will have to log in with their username and case sensitive password that are secured by some kind of encryption like bcrpyt. The data exchange will be secured with HTTPS or LTS. To protect from a brute force attack an account can be temporarily locked if a user fails their password 5 times. If a user fails their password they can reset it with a secure token link sent to their 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 allow customers to register using their first name, last name, address, phone number, credit card info, and pickup/drop-off locations.
* The system shall validate user credentials when logging in.
* The system shall allow for online scheduling or modification of reservations like cancelling.
* The system shall provide access to classes and practice tests that can be taken online to prepare for the DMV with progress tracking.
* The system shall allow admins to disable, change, or enable different training packages.
* The system shall include activity reports showing users that create, modify, or cancel reservations that can be downloaded.
* The system shall notify users and admins of potential DMV policy or rule updates.
* The system shall include role-based access control between admins and customers.

### 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 interface needs to allow for registration forms, booking, progress dashboards, and a contact page.
* Users include the customers, owner (Liam), IT officer (Ian), possible secretary, and drivers.
* Each user will interact with their respective pages for scheduling and reports like driver logs, account management, lessons, and progress.
* Interaction will be a web-based page with a design that adapts to mobile and desktop based on the sketches from Liam.

### 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?*

* Things that are not specifically addressed include the volume of customers and the DMV integration.
* It is assumed that users have internet access and basic literacy of a computer or mobile device.
* The cloud provider will handle security and backups.
* DMV provides updates that are compatible with the system.
* No advanced hardware integration needed.

### 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?*

* The DMV updates might have unexpected delays.
* Larger volume of users than originally expected.
* Resource constraints from a small team or finite budget.

### 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.*

