# 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?*

* In this project, the goal is to make an online and offline accessible system for DriverPass – a driving school – to handle booking, lesson management, and customer progress tracking more easily.
* DriverPass, the client represented by Liam (Owner) seeks to build a system for booking, cancelling or modifying driving lessons, accessing available packages and their progress, most especially the online practice tests.
* The system must allow access to customer data from any computer or mobile device and provide reporting capabilities for business operations.

### 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?*

* **Problem:** With existing manual booking of lessons and monitoring progress, there is unnecessary inefficiency and opportunity for errors. DriverPass needs a system that automates lesson booking and provides access to customer data.
* **Key Components:**
* An online lesson booking platform on the web.
* User management for customers, drivers, and employee management.
* Online classes and practice tests that one can track their progress.
* Automatic test updates through the DMV.

### 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?*

* It enables customers to book, modify or cancel lessons online.
* Track the progress of the online practice tests.
* Make training packages, practice tests and lesson progress available online.
* Be accessible from any device, with limited offline capabilities.
* Track actions such as who made, modified, or canceled reservations.

## 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?*

* It should be a web based system that should be accessible through both mobile and desktop devices.
* Normal functions such as booking lessons or seeing progress should have a load time of < 2-3 seconds.
* When DMV changes occur, the system should be updated automatically for practice tests.

#### 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 needs to work in Windows, macOS and Unix platforms.
* A database (e.g., MySQL) should be used to store user data, booking information, and test results.

#### 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?*

* We need to ensure the system authenticates the user and gives it some roles (driver, customer, admin).
* The username and password should be case sensitive input.
* Admins should get real time notifications of things like invalid login attempts or system failures to admins.

*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’s code shouldn’t be changed when adding/removing/modifyng changes to users. This should be done from the admin interface.
* It must be able to adapt the system to updates in the platform (browser, OS updates).
* IT admins must have full access to system logs, user management, and data modification functions.

#### 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 should log in using secure credentials (e.g., email and password, two-factor authentication).
* All communication between the server and clients must be encrypted (e.g., HTTPS).
* The system should lock accounts after multiple failed login attempts (e.g., 5 consecutive failed attempts).
* Users who forget their passwords (and are locked out) should be able to reset their passwords.

### 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 should validate user credentials during login.
* The system should enable customers to book, alter or delete driving lessons.
* On practice tests, the system shall track user progress.
* Admin users should be allowed to manage which user roles are available.
* The system will integrate with the DMV system for test updates.
* The system would store and then retrieve customer data, which would include package, service, and lesson schedule information.

### 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 should be user friendly andaccessible on the browser/mobile devices.
* Users: Customers, Drivers, Admins, and IT personnel.
* Customers should be able to manage their bookings and view test results.
* Drivers will view their assigned students and lesson schedules.
* Users and appointments will be managed by admins, and admins will have the ability to access how far customers progress.

### 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?*

* That all users have access to modern web browsers.
* Third party services (DMV for instance) will provide up to date practice test materials to the system.
* The skills to maintain the database and web servers is available in the IT team.

### 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 constraints could limit the ability to offer full offline functionality initially.
* The development timeline for such integration may be limited due to limited resources.
* It is possible that for real time sync in sync for offline and online data access, there will be limitations.

### 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.*

A screenshot of a project

Description automatically generated