# 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?*

* The purpose of this project is to provide driver training and preparation for the driving test at the local department of motor vehicles (DMV).
* The client, DriverPass, is a company owned by Liam that aims to address the need for better driving training. They want their system to enable customers to access online classes, practice tests, and on-the-road training services. Additionally, the system should allow customers to schedule driving lessons, track reservations, and provide various user roles with different access rights.

### 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 the system to provide comprehensive driver training, including online classes, practice tests, and on-the-road instruction.
* The problem they aim to fix is the high rate of people failing their driving tests at the DMV. The different components needed for this system include data management, security features, reservation tracking, customer registration and scheduling, compliance updates, and a web-based interface.

### 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 completed, this system should allow users to access driver training materials online, schedule and manage driving lessons, track reservations and modifications, and generate activity reports.
* Measurable tasks to achieve this include designing a user-friendly interface, implementing secure data management, integrating reservation tracking features, enabling user registration, and scheduling functionality, and establishing connectivity with the DMV for compliance updates.

## 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 needs to run in a web-based environment, accessible through computers and mobile devices.
* The system should run smoothly and respond quickly to user actions to ensure a good user experience.
* As for updates, the system should be updated periodically to incorporate new DMV rules and policies, as well as any system enhancements or bug fixes as needed. The frequency of updates may vary depending on the DMV's changes and system requirements.

#### 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 be able to run on multiple platforms, such as Windows, Unix, and others, to accommodate different users.
* To support the application, the back end requires a database to store and manage data related to customer information, driving appointments, user accounts, and other system functionalities. The database will be an essential tool for the system to operate effectively.

#### 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 between different users, the system will assign specific roles and access rights to each employee based on their responsibilities. For example, Ian, as an IT officer, requires full access to all accounts for password resets and access control.
* The input for usernames and passwords is case-sensitive, meaning that uppercase and lowercase letters are treated as different characters.
* The system should inform the admin of a problem when there are significant events or issues that require administrative attention. This includes changes made to records in the system, such as reservations being made, canceled, or modified. By notifying the admin, they can stay updated on system activities and quickly identify any potential problems or discrepancies.

#### 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 allow for changes to user accounts (adding, removing, modifying) without requiring any changes to the underlying code. This means that the system should have a user management functionality that allows administrators to perform these actions easily.
* To adapt to platform updates, the system should be designed to be flexible and compatible with the latest platform versions. This can be achieved by following coding best practices, using modular and scalable architecture, and staying up to date with platform updates to ensure compatibility.
* The IT admin requires full access to all accounts in order to perform various tasks such as resetting passwords for users who forget them or blocking access for employees who are no longer with the company. This level of access allows the IT admin to manage user accounts effectively and ensure the smooth functioning 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?*

* To log in, the user will need to provide their username and password.
* To secure the connection and data exchange between the client and the server, the system should use encryption protocols. These protocols encrypt the data transmitted between the client and server, making it difficult for unauthorized parties to intercept and decipher the information.
* If there is a "brute force" hacking attempt, where an attacker tries multiple login combinations to gain unauthorized access, the system should have security measures in place. For example, it can temporarily lock or suspend the account after a certain number of failed login attempts. This helps protect the account from unauthorized access and prevents further hacking attempts.
* If a user forgets their password, the system should provide a password recovery mechanism. This can involve sending a password reset link to the user's registered email address or using security questions to verify their identity. The user can then reset their password and regain access to their account.

### 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 users to create an account and log in with their username and password.
* The system shall validate user credentials during the login process.
* The system shall provide different user roles with specific access rights, such as admin, IT officer, and secretary.
* The system shall allow users to schedule driving lessons by selecting a preferred date and time.
* The system shall track and record reservations, including the user who made the reservation, any modifications, and cancellations.
* The system shall provide an activity report that displays the history of user actions, such as reservations and modifications, for auditing purposes.
* The system shall allow users to modify or cancel their driving lesson appointments online.
* The system shall support different driving lesson packages, allowing users to choose from options like Package One, Package Two, and Package Three.
* The system shall store and manage customer information, including personal details, address, phone number, and payment information securely.
* The system shall provide an interface for users to contact the company and vice versa.
* The system shall connect to the DMV to receive updates on rules, policies, and sample questions.
* The system shall provide a password recovery mechanism for users who forget their passwords.
* The system shall secure the connection and data exchange between the client and server using encryption protocols.
* The system shall allow the IT admin to manage user accounts, reset passwords, and block access when necessary.
* The system shall be adaptable to platform updates, ensuring compatibility with different operating systems and environments.

### 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 needs to provide a clear and organized layout, displaying information such as test progress and driver notes. The different users include the owner, IT officer, secretary, and customers. The owner and IT officer need full access and management capabilities, while the secretary and customers should be able to schedule, modify, and cancel appointments. The interface should be accessible through web browsers on computers and mobile devices for convenient interaction.

### 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 design above does not specifically address features related to payment processing, integration with DMV updates, and future feature enhancements.
* Assumptions I am making in the design include the assumption that users have access to internet-connected devices and basic computer literacy skills. Additionally, the design assumes the availability of necessary technological infrastructure, such as web servers and databases, to support 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?*

* The team may face constraints in terms of available time, budget, and technology. The timeline for the project is defined, and any delays or changes may impact overall delivery. The budget may have constraints that could affect the scope and implementation of certain features.

### 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.*

[Insert chart]

A picture containing text, screenshot, diagram, number

Description automatically generated