# 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 aims to address the need for better driver training, particularly for those preparing for driving tests at the DMV.
* The company's vision is to provide online classes, practice tests, and on-the-road training to improve the success rates of driving test applicants.
* The system should enable access to data from anywhere, online as well as offline, allowing users to download reports and information for offline use.

### 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 recognizes a gap in the market for comprehensive driver training, leading to many people failing their driving tests.
* The company seeks to provide online classes, practice tests, and on-the-road training to improve driver preparedness and success rates.
* The system should support online reservations for driving lessons, tracking of user progress and performance, and management of different packages for driving training.
* Different users, including the owner (Liam), the IT officer (Ian), and the secretary, will have varying roles and access levels within the system.
* The system should also comply with DMV regulations and be able to receive updates and notifications from the DMV regarding rule changes and policy updates.

### 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?*

* The system should provide online classes, practice tests, and on-the-road training to prepare students for driving tests.
* It should allow users to access data from anywhere, online as well as offline, and download reports and information for offline use.
* The system should enable online reservations for driving lessons, tracking of user progress and performance, and management of different training packages.
* Security measures should be implemented to protect user data and ensure compliance with DMV regulations.
* The system should have a user-friendly interface, accessible from various devices, and should be scalable and adaptable to future needs.

These objectives can be measured through these tasks:

1. Develop an online platform with features for online classes, practice tests, and on-the-road training.
2. Implement offline access to data and the ability to download reports and information.
3. Create a reservation system for driving lessons, including tracking of user progress and performance.
4. Establish security measures to protect user data and ensure compliance with DMV regulations.
5. Design a user-friendly interface accessible from various devices.
6. Ensure scalability and adaptability of the system for future enhancements and changes.

## 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 be able to run in a web-based environment to allows users to access it from various devices with internet connection, such as desktops, laptops, tablets, and smartphones.
* The system should process transactions and load content quickly to provide a seamless user experience. Specifically, the time it takes to connect to the central server, retrieve information (e.g., practice tests, training materials), and display it to the user should not exceed 10 seconds. This ensures that users can access the information they need efficiently and without delays.
* The system should be updated regularly to ensure that it meets the latest DMV standards and regulations, incorporates new features or content, and addresses any bugs or issues. Updates should be pushed from a central bank system with the presence of a technician for backup to ensure that they are verified and applied correctly.

#### 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 software should run on multiple platforms, including Windows, MacOS, and Linux, to ensure compatibility with a wide range of devices and operating systems.
* The backend of the system requires a database to support the application, such as MySQL or PostgreSQL, to store user data, practice tests, training materials, and other relevant information.
* It should be designed to be platform-independent, allowing users to access it from any device or operating system without any issues.

#### 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?*

* User identification will be based on unique credentials, such as usernames or email addresses, ensuring that each user has a distinct identity within the system.
* It will treat input as case-insensitive to provide a seamless user experience and prevent confusion.
* It should inform the admin immediately of any critical problems, such as a database error or a security breach, to ensure timely resolution and minimize downtime.

#### 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?*

* It will support user management functionalities, allowing administrators to add, remove, or modify user accounts without requiring changes to the system's underlying code.
* To adapt to platform updates, the system will be designed with modularity and compatibility in mind, ensuring that it can be easily updated to support new platforms or versions.
* The IT admin will require access levels that enable them to manage system configurations, perform maintenance tasks, and oversee user accounts and permissions. These will be restricted to authorized access only.

#### 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 be required to log in using a username and password combination, which will be verified against a secure database storing user credentials.
* To secure the connection and data exchange, the system will use HTTPS to encrypt data transmitted between the client and the server.
* In the event of a "brute force" hacking attempt, the system will lock the user account after a specified number of failed login attempts, requiring the user to contact support to regain access.
* If a user forgets their password, they will have the option to reset it by providing their email address or answering security questions.

### 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 validate user credentials when logging in.
* The system shall provide users with a way to reset their password.
* The system shall provide users with access to online practice exams for driving tests.
* The system shall allow students to review incorrect answers and explanations for practice exams.
* The system shall offer on-the-road training services for driving test preparation.
* The system shall allow users to track their progress and performance in the practice exams and training sessions.
* The system shall provide users with the ability to schedule and manage driving lessons.
* The system shall provide secure payment processing for paid services.
* The system shall allow users to access data online as well as offline, including downloading reports and information for offline use.
* The system shall generate reports for administrators to track overall system performance.

### 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 be user-friendly and intuitive for users of all skill levels.
* Different users of the interface include students preparing for driving tests, instructors providing on-the-road training, and administrators managing the system.
* Students should be able to access and take practice exams, track their progress, schedule driving lessons, and access training materials.
* Instructors need to be able to view student progress, schedule and manage driving lessons, and provide feedback.
* Administrators should be able to manage user accounts, monitor system performance, and generate reports.
* The interface should be accessible through both mobile devices and web browsers to accommodate users' preferences and provide flexibility in accessing the system.

### 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 assumption that users will have basic computer literacy skills to navigate the system.
* The assumption that users will have access to a stable internet connection for online components of the system.
* The assumption that the system will be accessible on common web browsers and mobile devices.

### 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?*

* Limited budget for system development, potentially restricting the scope of features or the use of advanced technologies.
* Time constraints for project completion, which may affect the thoroughness of testing or the inclusion of additional features.
* Resource constraints, such as limited server capacity or network bandwidth.
* Limited availability of skilled personnel, which may impact the speed and quality of development.

### Gantt Chart

*A diagram with multiple colored squares

Description automatically generated with medium confidencePlease 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.*