# 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?*

* Our consulting company aims to design a comprehensive system for DriverPass that enhances the training and preparation of students for their driving tests.
* DriverPass, the client, wants their system to facilitate online practice exams, on-the-road training, and DMV rule compliance.
* The system should be accessible from any device, provide secure data management, and support different user roles with specific permissions.
* The goal is to provide a seamless user experience while ensuring data integrity and security.

### 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 identified a significant problem: many individuals fail their driving tests due to inadequate preparation.
* The company seeks to address this issue by offering better driver training options.
* The proposed solution involves creating a system that provides online classes, practice tests, and on-the-road training sessions.
* The system aims to fill the gap in driver education by offering flexible, accessible, and comprehensive training resources.
* This includes the ability for students to book lessons, access study materials, and receive feedback on their progress.

### 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 enable users to:

* Register and manage their driving lessons online.
* Schedule, modify, and cancel reservations for driving lessons.
* Access online practice tests and track their progress.
* Receive timely updates on DMV rules and policies.
* Ensure secure data handling and user role management.
* Generate detailed reports on user activities and lesson details.
* Allow administrators to manage user accounts and system configurations.
* Provide a user-friendly interface accessible on both desktop and mobile devices.
* Track and log changes made to user data and reservations for accountability.
* Allow for future scalability to add or modify training packages.

## 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?*

* **Environments:** The system needs to be web-based and accessible via browsers on both desktop and mobile devices.
* **Speed:** The system should have quick response times, with operations like login, booking, and accessing content completed within 2-3 seconds for most operations.
* **Updates:** Major updates should occur quarterly, with minor patches as needed.

#### 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?*

* **Supported Platforms**: The system should run on Windows, macOS, Linux, Android, and iOS.
* **Backend Tools:** The system requires a robust backend, likely using a cloud-based infrastructure with a relational database such as MySQL or PostgreSQL.

#### 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:** Users must be uniquely identified through secure login credentials.
* **Data Sensitivity:** The system should ensure accurate handling of case-sensitive input and distinguish between different users.
* **Error Handling:** The system should notify administrators immediately in case of data anomalies or errors.

#### 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 Management:** The system should allow administrators to add, remove, or modify user roles without code changes.
* **Platform Updates:** The system must adapt seamlessly to updates in the operating environment.
* **IT Admin Access:** IT administrators need extensive access to system settings, user account management, and security configurations.

#### 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?*

* **Login Requirements:** Users must log in using secure credentials, such as a username and password.
* **Data Security**: All data exchanges must be secured with protocols like HTTPS, and sensitive data should be encrypted.
* **Brute Force Protection:** Accounts should lock after multiple failed login attempts to prevent brute force attacks.
* **Password Recovery:** Users should have a secure and straightforward method for password recovery.

### 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.”*

* **User Authentication:** The system shall validate user credentials during login.
* **Online Education:** The system shall allow users to register for and access online classes and practice tests.
* **Scheduling:** The system shall enable users to schedule, modify, and cancel driving lessons.
* **Activity Tracking:** The system shall track and log user activities and changes to records.
* **Reporting:** The system shall generate reports in formats like Excel for downloading.

### 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.)?*

**Interface Needs:**

* **Accessibility:** The interface must be user-friendly and accessible via web browsers on both desktop and mobile devices.
* **User Roles:**
  + **DriverPass Owner:** Full access to all system functionalities.
  + **IT Officer:** Access to system maintenance, user management, and security features.
  + **Secretary:** Access to scheduling and managing appointments.
  + **Customers:** Access to register, schedule lessons, and take practice tests.

**User Interactions:**

* Users will interact with the system primarily through a web browser.
* The interface should provide intuitive navigation, clear instructions, and feedback for each user role.

### 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?*

**User Assumptions:**

* Users have access to devices capable of running modern web browsers.
* Users possess basic computer literacy and internet access.

**Technology Assumptions:**

* DriverPass has the necessary IT infrastructure to support a cloud-based system.
* The system will integrate with existing DMV databases for updates on rules and sample questions.

### 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?*

**System Limitations:**

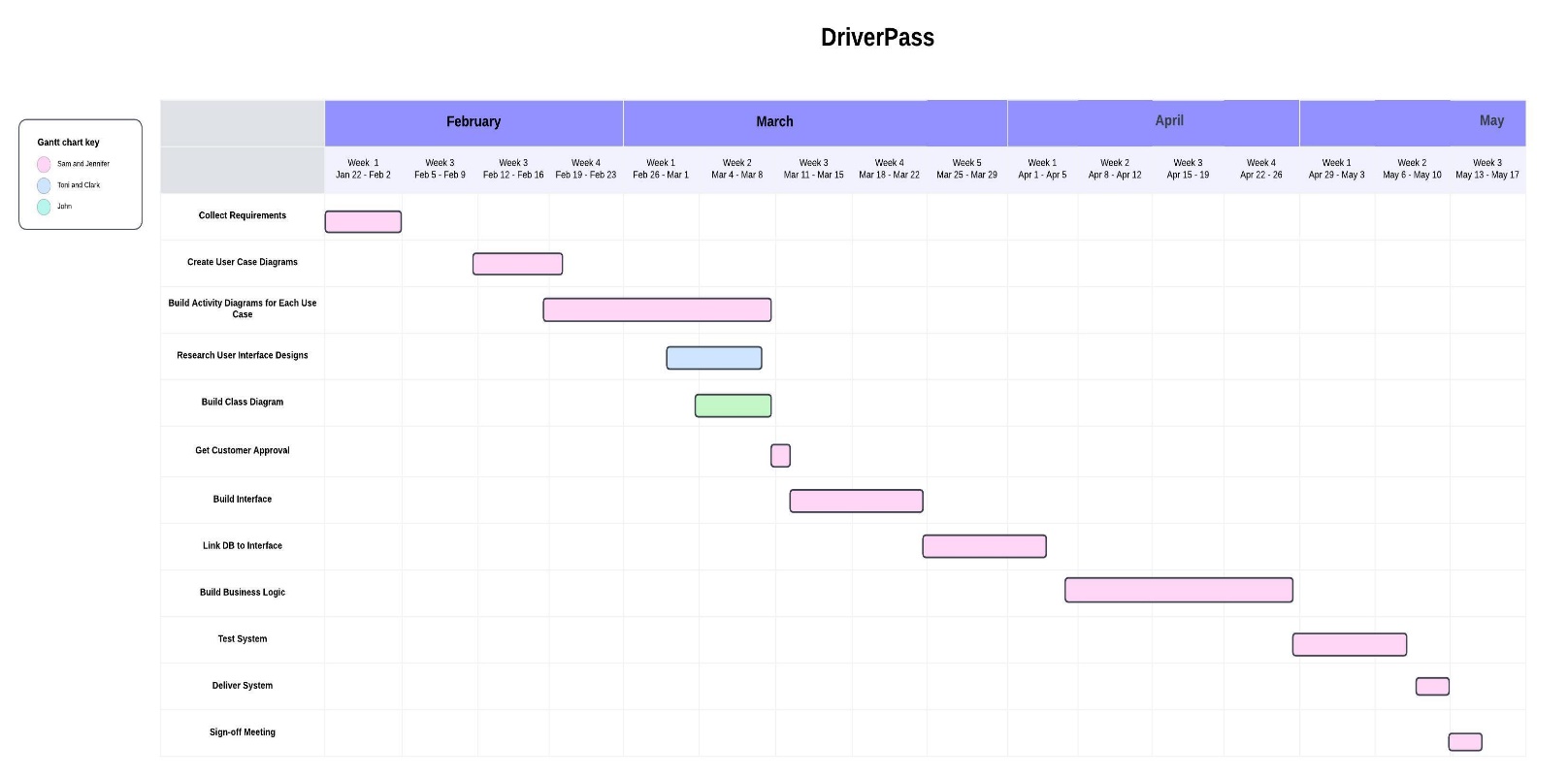
* Customization of packages (adding/removing) will require developer intervention.
* Initial system might not include future features, focusing on core functionalities first.

**Resource Limitations:**

* Budget constraints may limit the inclusion of additional features or scalability.
* Time constraints may affect the depth of customization and the timeline for project completion.
* Availability and expertise of developers may impact the speed and quality of development.

### 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.*

**