# 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 is developing a system to help students successfully pass their driving tests by offering both online and in-person training. As part of our consulting company’s role, we aim to design a platform that provides access to online practice exams, lesson scheduling, and training session management. The system must be user-friendly, accessible across multiple devices, and secure, ensuring role-based permissions and tracking functionalities for efficiency.

### 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?*

* Many individuals struggle to pass their driving test due to a lack of proper training resources. DriverPass aims to bridge this gap by offering structured learning programs that include online coursework, practice tests, and in-person training.
* Provide students with access to training materials and practice exams.
* Enables scheduling and management of driving lessons.
* Tracks user progress, test results, and instructor feedback.
* Maintains security with different access levels for users (admin, instructors, customers, etc.).
* Stay updated with DMV regulations to ensure compliance with the latest test requirements.

### 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?*

* Users should be able to create an account and manage their personal information.
* Purchasing the right training package based on their needs.
* Lesson appointments must be easy to book, modify, or cancel.
* The system must provide access to practice exams and up-to-date course content.
* Students should be able to monitor their test results and see instructor feedback.
* Staff must have access to customer records and manage appointments efficiently.
* Staff and admins will manage customer profiles and appointment schedules.
* There should be tools for tracking lesson history and generating reports.
* The overall goal is to increase student success rates on DMV exams.
* Updating test content and DMV policy information should be simple and secure.
* Administrative tasks should be streamlined through automation.
* The system must remain scalable, secure, and user-friendly across all devices.

## 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 must operate as a web-based platform accessible through browsers and mobile devices.
* Page loads and transactions should occur within 3-5 seconds under normal internet conditions.
* They system should sync with external services (i.e. DMV or payment vendors) in under 10 seconds.
* Regular system maintenance and updates should be scheduled during off-peak hours and occur biweekly or monthly 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?*

* The system will run on a cloud-based infrastructure accessible via macOS, Windows, Android, and iOS browsers.
* A secure backend database (i.e. PostgreSQL) will be used to store user data, appointments, and results.
* The system must integrate with third-party tools like payment processors and DMV content providers through APIs.

#### 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 roles and credentials (i.e. admin, staff, customer).
* Inputs like usernames and passwords will be case-sensitive to enhance security.
* Any failed login attempts, suspicious booking activity, or system errors should trigger admin notifications or logs for review.

#### 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?*

* Admins must be able to enable or disable training packages without modifying system code.
* The system should allow for adding/editing/removing customer data and appointments from the admin dashboard.
* The platform will be compatible with regular cloud and OS updates, with minimal disruptions.
* IT administrators should have full access rights to manage users, packages, and system settings securely.

#### 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 must log in with a secure password, and two-factor authentication can be optionally enabled.
* Password reset options will be handled through email verification with token expiration.
* All data transfers must use SSL encryption to secure user and payment information.
* After three failed login attempts, an account will be temporarily locked, and admins will be notified.
* A secure audit trail will record all user activity, accessible only to authorized roles.

### 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.”*

* Customers can create and log into their accounts using secure credentials.
* The platform checks login details and restricts access based on user roles.
* Users are able to browse and enroll in different training packages.
* The appointment system lets students schedule, update, or cancel driving lessons.
* Past and upcoming appointments are shown in each user’s dashboard
* Online course materials and practice exams are available from the student portal.
* Test results and instructor feedback are automatically saved and displayed.
* Staff members can update student info, lesson bookings, and availability.
* Admins have access to enable or disable training packages as needed.
* Activity logs are generated to track changes, bookings, and user actions.
* The system sends automatic updates and alerts for schedule or policy changes.
* Password reset options are provided through verified email links.

### 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 must be intuitive and accessible to all users, including customers/students, staff, and administrators.
* Customers will access the platform through a web browser on desktops, tablets, or smartphones.
* The layout should include clear navigations for booking lessons, viewing test progress, and updating personal info.
* Staff members need access to appointment scheduling tools, customer profiles, and lesson tracking.
* Administrators should have a dashboard with control to edit training packages, manager users, and monitory system activity.
* The interface should offer real-time notifications, display test results, and provide appointment reminders.
* A responsive design is required to ensure compatibility with different screen sizes and devices.
* Accessibility standards (like screen reader support and proper contract ratios) must be met for inclusivity.

### 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?*

* It’s expected that users will have a stable internet connection when accessing the system.
* Customers will use valid and functional payment methods when booking lessons or packages.
* Staff and admins will be trained to use their respective parts of the system.
* The DMV will provide regular updates to rules and policies in a format that can be integrated into the platform.
* Users will access the platform from standard devices (desktop, laptop, smartphone, tablet).
* Customers will have a basic level of comfort with navigating online forms and booking tools.
* Server maintenance and updates will occur during low-traffic hours to minimize disruption.

### 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 system will not have voice commands or voice navigation features.
* Functionality will be limited if there is no internet connection.
* Any interruptions in third-party services (i.e. DMV or payment processors) may affect performance.
* User experience may vary slightly across older devices or unsupported browsers.
* The project is limited by budget and timeline constraints, so some features maybe be postponed for future updates.
* 24/7 live support might not be available right away when the system first launches.

### Gantt Chart

(separate document)