# 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?*

* To develop a cloud-based driving school management system for DriverPass that enables online and in-person driver training services.
* To create a secure and accessible platform allowing customers to schedule driving lessons, access training materials, and take practice tests.
* To provide administrators with management capabilities to track progress, schedule appointments, and manage user roles.
* To help DriverPass improve driver training outcomes and increase DMV test pass rates.

### 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 students fail DMV driving tests due to inadequate preparation.
* The system will provide comprehensive training through online classes, practice tests, and on-road training with professional instructors.
* The platform will support customer management, appointment scheduling, package management, and progress tracking.
* The system needs to integrate educational content delivery with business operations management.

### 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?*

Create a secure web-based system accessible through multiple devices and platforms

* Develop a web-based system accessible via multiple devices.
* Implement a role-based user management system.
* Create an appointment scheduling system that:
  + Tracks 10 cars and assigned drivers.
  + Supports 2-hour lesson blocks.
  + Manages pickup/drop-off locations.
* Build a package management system with flexible package activation and tracking.
* Enable progress tracking for user activities, appointment changes, and test scores.

## 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 be web-based and support access from desktops, tablets, and mobile devices.
* Should provide real-time data updates with minimal latency.
* System updates should occur during non-peak hours to avoid downtime.

#### 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 cloud-hosted to minimize internal IT maintenance.
* Must support modern web browsers (Chrome, Firefox, Edge, Safari).
* Requires database management for storing user records and transaction logs.

#### 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?*

* Role-based authentication ensures appropriate access levels for different users.
* Automated alerts should notify administrators of scheduling conflicts or errors.
* Input validation for fields like names, phone numbers, and payment information.

#### 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 should be able to add, remove, or modify user accounts without requiring code changes.
* The system should be adaptable to DMV regulation updates.
* IT admin should have full control over user permissions and system settings.

#### 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?*

* Multi-factor authentication for admin and IT roles.
* Encrypted data storage for sensitive information like customer payment details.
* Automatic lockout after multiple failed login attempts.
* Secure password recovery via email verification.

### 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 customers to create accounts, book lessons, and track progress.
* The system shall enable instructors to view and manage their scheduled lessons.
* The system shall allow administrators to modify, approve, or cancel appointments.
* The system shall provide practice tests with result tracking and status updates.
* The system shall generate reports on customer activities, test results, and instructor performance.
* The system shall integrate with DMV updates for test and policy changes.
* The system shall provide email and SMS notifications for booking confirmations and reminders.

### 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 web-based and optimized for mobile and desktop access.
* Customers need an intuitive dashboard to view lesson schedules, practice test progress, and payment history.
* Instructors need a portal to check appointments and update lesson notes.
* Admins require tools for managing users, schedules, and reports.

### 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?*

* Users will have basic familiarity with online booking systems.
* Customers will provide accurate personal and payment details.
* Internet access is required for full system functionality.

### 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?*

* Initial package customization is limited; future releases may allow greater flexibility.
* System depends on external DMV updates, which may cause delays in policy synchronization.
* Budget constraints may limit advanced AI-based test assessments.

### 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