# 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 provide a robust system to help students prepare for their DMV driving tests through online classes, practice tests and on-the-road driving sessions.
* The client wants to streamline operations by enabling online reservations, activity tracking and role-based access for users & employees.
* The system will run on a cloud-based platform, minimizing technical overhead and ensuring accessibility across devices.

### 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 need for better driver training to address the high failure rate of DMV driving tests.
* The system will address several challenges, including:
* Managing customer registrations, session bookings and modifications.
* Providing online courses and practice tests.
* Tracking and managing drivers, cars and session schedules.
* Keeping course materials and tests current with DMV requirements.
* The system components will include:
* A customer-facing online portal for booking and progress tracking.
* Internal tools for employee roles like the IT officer and secretary.
* Integration with DMV updates for rules, policies and test content.

### 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 will allow customers to:
  + Book, modify and cancel driving sessions online.
  + Access online courses and practice tests.
  + Track their progress on sessions and tests.
* The system will allow the secretary to:
  + Register user accounts and manage appointment bookings.
* The system will allow administrators to:
  + Manage user accounts and reset passwords.
  + Monitor system activity through detailed logs and reports.
* The system will ensure security, scalability and compliance with DMV requirements.
* Measurable tasks include:
  + Implementing a booking system with role-based access.
  + Creating a tracking system for sessions, users and test results.
  + Exporting reports for offline analysis.

## 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 will use a web-based, cloud-hosted platform.
* It must handle multiple users at the same time without delays.
* Regular updates from DMV content must be applied in real-time.

#### 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 operate on current web browsers, like Chrome or Firefox, and across mobile devices.
* The backend will include a secure database for storing customer, schedule and financial information.

#### 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 must distinguish between users, like administrator, secretary or customer.
* Input fields, such as passwords, will be case-sensitive.
* System alerts will notify the IT officer of any unauthorized access attempts.

#### 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?*

* Administrators must be able to enable or disable session packages without code changes.
* The system must handle platform updates and integrate with future DMV requirements.
* IT admins need full access to modify and maintain 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?*

* Users must log in with a username and case-sensitive password.
* Data transmissions should be encrypted.
* Accounts must lock after three failed login attempts, with an automated notification sent to the IT officer.
* Password recovery will involve 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.”*

* General System Functionality:
  + The system shall validate user credentials during login.
  + The system shall encrypt all sensitive data and information.
  + The system shall log all user actions, including login attempts, bookings and modifications.
  + The system shall send automated notifications for booking confirmations, cancellations and password recovery.
* Customer-Related Functionality:
  + The system shall allow customers to register for an account and update personal account information.
  + The system shall allow customers to search for available driving session slots by date, time and driver.
  + The system shall allow customers to book, cancel, and modify driving session reservations.
  + The system shall track customer progress on online courses, practice tests and driver’s notes from driving sessions.
  + The system shall allow customers to reset forgotten passwords using an automated process.
* Employee-Related Functionality:
  + The system shall allow secretaries to register new customers and update customer personal information.
  + The system shall allow secretaries to book, cancel, and modify driving session reservations.
  + The system shall allow drivers to view their assigned driving session schedules.
  + The system shall allow drivers to record session notes for each driving session.
  + The system shall allow IT officers to manage user accounts, including resetting passwords.
  + The system shall allow IT officers to maintain and modify the system database.
* Administrative Functionality:
  + The system shall allow administrators to update driving package availability.
  + The system shall allow administrators to block or unblock user accounts.
  + The system shall allow administrators to access system logs and generate reports.
  + The system shall allow administrators to update DMV-related course and test materials.
* System Maintenance and Updates:
  + The system shall integrate updates to DMV rules and policies.
  + The system shall notify administrators of any security breaches or unauthorized login attempts.

### 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 will:
  + Be user-friendly and accessible via web browsers and mobile devices.
  + Include features for customer bookings, progress tracking and password resets.
  + Provide administrators tools to manage accounts, review logs and export reports.
* Different users:
  + Customers: Update personal information, manage booking information, access courses and tests, view course and test progress, view driver information and notes, reset their password.
  + Secretary: Register customers, update customer information, manage booking information and schedule.
  + Drivers: View booking schedule, log driving notes on scheduled appointments.
  + IT Officer: Manage user accounts and passwords, maintain and modify the system database.
  + Administrator: Manage user accounts and passwords, manage customer registration and information, manage booking information and schedule, manage session package availability, access user data 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 access to the internet and use current web browsers.
* The system will not initially include features for DMV notifications beyond updates to test materials.
* All users will follow the company’s guidance on using the system securely.

### 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 relies on internet connectively for real-time operations, offline use is limited to exporting reports.
* Budget constraints may limit customization for features like customer-facing design enhancements.
* The timeline may affect the delivery of additional features like advanced package management.

### 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.*

