# CS 255 Business Requirements Document

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?*

* Client: DriverPass, represented by Liam (owner) and Ian (IT officer).
* Purpose: To build a system that supports online and on-the-road training for driving tests.
* Goal: Enhance customer success rates at DMV driving tests by providing:
  + Online classes and practice tests.
  + On-the-road driving lessons.

### 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?*

* Client's Needs:
  + Access and manage customer and business data online from any device.
  + Provide downloadable reports (e.g., Excel format) for offline use.
* Core Issues to Address:
  + Simplify scheduling for driving lessons.
  + Improve data security and role-based access management.
  + Maintain compliance with DMV regulations.
* System Components:
  + Online user accounts for customers and employees.
  + Reservation and scheduling functionality for lessons.
  + Role-based access for different user types.
  + Integration with DMV 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?*

* System Goals:
  + Allow customers to register, schedule, cancel, and modify lessons.
  + Track all reservation activities with timestamps and responsible users.
  + Support role-based functionality for admin, IT, secretary, and customers.
  + Display lesson details and driver feedback in the interface.
  + Allow package management (disable packages as needed).
  + Notify users of DMV updates.
* Measurable Tasks:
  + User registration and secure login implementation.
  + Develop scheduling system for driving lessons.
  + Enable data tracking and reporting.
  + Build interface showing lesson progress 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?*

* Web-based, cloud-hosted system to ensure minimal downtime.
* Scalable to handle increasing user demands.
* Update frequency aligned with DMV changes and internal policies.

#### 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?*

* Accessible via all major browsers and mobile devices.
* Backend support with a database for scheduling and tracking.
* Requires cloud infrastructure for backup and security.

#### 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?*

* Unique user accounts with role-specific rights.
* Track and log changes to data with timestamps.
* Notify admin of system issues or unauthorized changes.

#### 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?*

* Flexible package management: disable or modify without full system updates.
* System compatibility with platform updates (e.g., browser updates).
* IT admin access to manage accounts and monitor system usage.

#### 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?*

* Secure login with strong password requirements.
* Encrypted connection for data exchange between client and server.
* Lock account temporarily after multiple failed login attempts.
* 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 users to:
  + Register for an account and reset forgotten passwords.
  + Schedule, modify, or cancel driving lessons online or through the office.
* The system shall enable admins to:
  + Track user activity and generate activity reports.
  + Disable or modify packages as needed.
* The system shall notify users of changes from the DMV.
* The system shall validate payment details during registration.

### 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.)?*

* Users:
  + Admin, IT officer, secretary, and customers.
* Interface Needs:
  + Admin and IT officer dashboards for tracking and management.
  + Customer portal for lesson scheduling, package selection, and test progress.
  + Secretary portal for scheduling and customer communication.
* Access:
  + Accessible via web browsers and mobile-friendly.

### 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?*

* Customers have access to the internet for scheduling lessons.
* Secretaries will assist customers who prefer phone-based or in-person scheduling.
* The cloud-based platform will handle backups and updates without local IT involvement.

### 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 requires developer involvement; only disabling packages are supported.
* Budget limits flexibility in adding new features during initial development.
* Dependencies on DMV for timely updates on test requirements.

### 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.*

