# 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?*

* The purpose of this project is to design a web-based system that allows DriverPass to deliver online driver training, practice exams, and on-the-road lesson scheduling.
* The client, DriverPass, wants a system that can support both students (customers) and staff in managing training, scheduling, and reporting.
* The system must allow customers to access practice tests, online lessons, and reservation scheduling from any device.
* The system must provide secure access for employees to manage appointments, track drivers, and generate activity reports.
* DriverPass also needs the system to ensure compliance with DMV rules and provide updates when policies or test questions change.

### 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 that many students fail their DMV driving exams due to poor preparation and a lack of combined study and practice resources.

The company’s goal is to fix this problem by providing a system that offers:

* Online practice exams and training content aligned with DMV standards.
* On-the-road driving lessons scheduled with trainers and vehicles.
* In-person sessions covering DMV rules and policies (depending on package).

Components needed for this system include:

* A secure web-based platform hosted in the cloud.
* Online student accounts with password recovery.
* Scheduling and reservation management for driving lessons.
* Package selection (6-hour, 8-hour, 12-hour options with varying features).
* Progress tracking (practice test results, lesson notes, completion status).
* Activity logging and reporting tools.
* Role-based access for owner, IT officer, secretary, and customers.
* Integration with DMV updates for new rules and test questions.

### 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?*

Allow customers to:

* Create accounts and securely log in.
* Reset forgotten passwords automatically.
* Schedule, modify, or cancel lesson appointments online.
* Access online practice exams and training modules.
* View progress reports (scores, test history, lesson notes).

Allow employees (secretary, IT officer, owner) to:

* Enter customer information for phone/in-person bookings.
* Manage reservations (create, update, cancel).
* Track driver schedules, vehicles, and assignments.
* Reset or block accounts when necessary (IT officer).
* Generate activity and Excel-compatible reports.

Provide the owner with tools to:

* Enable/disable training packages.
* View logs of who created, canceled, or modified appointments.

Ensure compliance by:

* Receiving DMV updates on rules, policies, and questions.
* Sending notifications to administrators when changes occur.

Ensure security by:

* Implementing role-based access.
* Hosting in the cloud with backups and protections managed.

## 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 should be web-based and accessible through major browsers such as Chrome, Edge, Firefox, and Safari.
* The system shall load all pages and dashboards within 3 seconds under normal network conditions.
* The system shall be capable of handling up to 1,000 concurrent users without performance degradation.
* The system shall perform weekly maintenance updates and quarterly feature updates without affecting live usage.

#### 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 hosted on a Windows or Linux-based web server and be compatible with modern web technologies (HTML5, CSS3, JavaScript, and SQL-based databases).
* The backend shall use a relational database such as MySQL or PostgreSQL to manage user accounts, driving course data, and progress tracking.
* The application shall be cloud-compatible, allowing future scalability and off-site data storage.

#### 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?*

* The system shall distinguish between users using unique usernames or email addresses combined with secure passwords.
* User input shall be case-sensitive where necessary (e.g., passwords) but not for general text inputs such as names or email addresses.
* The system shall automatically notify the administrator if data inconsistencies, failed logins, or system errors occur.

#### 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?*

* The system shall allow administrators to add, remove, or modify user accounts and course materials through an admin dashboard without modifying the source code.
* The system shall remain compatible with future web browser and platform updates through routine maintenance.
* IT administrators shall have secure, limited back-end access for troubleshooting, server management, and system configuration.

#### 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?*

* The system will require users to log in using a valid email/username and password.
* All communications between the client and the server shall be secured using SSL/TLS encryption.
* The system shall lock a user’s account for 15 minutes after five failed login attempts to prevent brute-force attacks.
* If a user forgets their password, the system shall provide a secure password reset link sent via email.
* User passwords shall be hashed and never stored in plain text.

### 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 validate user credentials when logging in.
* The system should allow students to register for online driving courses and schedule in-person driving lessons.
* The system shall allow administrators to manage users, instructors, course materials, and schedules.
* The system should track each student’s progress and provide reporting tools for both instructors and administrators.
* The system shall generate automated notifications for upcoming lessons or course completion.
* The system shall allow secure online payments for course enrollment.

### 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 browser-based, designed to be responsive and accessible on both desktop and mobile devices.
* Students shall be able to view lessons, book sessions, track progress, and manage their profiles.
* Instructors shall have access to scheduling tools, student records, and progress tracking dashboards.

Administrators shall have full access to managing users, course content, and system settings through a separate admin interface.

* The interface shall use simple navigation with consistent buttons, icons, and menus for all users.

### 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 is assumed that all users will have access to the internet and a modern web browser.
* It is assumed that instructors and administrators will have basic computer literacy.
* It is assumed that DriverPass will have the resources to maintain a secure web hosting environment.
* It is assumed that users will provide accurate information during registration.

### 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 depends on stable internet connectivity for proper functionality.
* Budget limitations may restrict advanced features like mobile apps or AI-driven progress tracking at launch.
* The project timeline may limit thorough user testing before deployment.
* The system may not integrate with third-party scheduling or payment platforms initially but may include them in future updates.

### 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 close-up of a chart

AI-generated content may be incorrect.