# 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?*

* Improve Driving Training.
* Liam is the client; Ian is the IT officer.
* The project aims to design a tailored digital platform for DriverPass, a driver education provider addressing the critical need for effective DMV test preparation. This unique system will integrate online learning modules, customizable practice exams, interactive on-the-road training, and streamlined appointment scheduling. Emphasizing secure access, it will cater to various user roles, enabling efficient tracking and data retrieval, ultimately guiding students through a structured journey to DMV test success.

### 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?*

* Provide users with online access to driver education classes, practice tests, and training materials.
* Allow customers to make, modify, and cancel appointments for driving lessons online or through other channels.
* Track lesson details, including session times, assigned trainers, and cars.
* Support role-based access with different permissions for employees, including admin-level access for IT personnel.
* Enable DriverPass to track and audit activity, including who made reservations or modifications.

### 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?*

* Facilitate user registration, scheduling, and training sessions.
* Provide flexible, cloud-based access to DriverPass employees and customers.
* Allow administrative tracking of user actions, package adjustments, and activity logs.
* Include robust security and account management.
* The system will support seamless online booking and comprehensive account management, allowing users to schedule and manage appointments with ease.
* Robust security protocols will ensure protected data access, with capabilities for generating detailed reports to aid in administrative oversight and analysis.
* User activity, including appointment modifications and updates, will be meticulously tracked and auditable, fostering accountability and providing insights into user engagement patterns.

## 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 and accessible on mobile devices.
* Quick response times with a focus on scalability for potential high traffic.
* Periodic updates, at least quarterly, with automatic syncing to avoid redundancy.

#### 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?*

* Web application hosted on the cloud.
* Database support to store customer information, reservations, and progress.

#### 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 IDs: role-based access ensures accuracy.
* Sensitive input fields should be case-insensitive.
* Alert admins when there are repeated failed login attempts or errors in data synchronization.

#### 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?*

* User management features for adding/removing users without direct code changes.
* Compatibility with future platform updates and API integrations.
* IT Admin Access: Full control for system maintenance and user account management.

#### 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?*

* Login Requirements: Two-factor authentication and secure password storage.
* Connection Security: HTTPS encryption for all data transfers.
* Hacking Attempts: Lock accounts temporarily after multiple failed attempts and alert admins.
* Password Recovery: Secure, user-friendly password reset option.

### 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 will validate user credentials upon login, ensuring secure access and safeguarding user information.
* Users will be able to conveniently schedule, reschedule, and cancel appointments, providing flexibility and control over their training sessions.
* Comprehensive tracking of lesson specifics—including session times, assigned instructors, and vehicle details—will be maintained for each booking.
* Users will gain access to a range of online courses, with built-in progress tracking and test completion features to support learning milestones.
* Automatic notifications will inform users of any DMV policy changes, keeping them up to date on regulatory adjustments.
* Administrators will have the capability to generate detailed activity and audit reports, enabling effective oversight and operational transparency.

### 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.)?*

* Admin: Access to user accounts, reports, and logs.
* IT: Manage roles, reset passwords, monitor system health.
* Secretary: Schedule appointments, manage customer info.
* Customer: Book lessons, view progress, reset passwords.
* Web-based 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?*

* Users are comfortable navigating web and mobile applications.
* The client has the necessary technology infrastructure and user knowledge for cloud services.
* Basic DMV integration is feasible without high customization needs.

### 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?*

* Cloud dependency means limited offline functionality.
* Limited budget may restrict extensive customization and advanced features.
* Tight schedule for each development phase, which may limit testing and refinement.

### 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 computer

Description automatically generated*