# 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 comprehensive system for DriverPass that provides training for training for students for their driver’s test at their local DMV. It will contain services like: online practice exams, scheduling for on-the-road training, and data management to be able to access some services offline. The client, DriverPass, wants their system to allow students to take online classes, schedule and manage driving lessons, and access various training packages.

### 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 is hoping to take advantage of a void in the market when it comes to training students for the driving test at their local department of motor vehicles (DMV). The system needs to provide:

* Online practice exams and classes
* Scheduling for driving lessons
* User role management and security
* Tracking and reporting of user activities
* Integration with DMV updates
* A cloud-based solution for seamless operation and data backup

### 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 should:

* Allow users to access practice exams and training materials online
* Enable customers to schedule, cancel, and modify driving lessons
* Track lesson reservations and match users with drivers and cars
* Implement user roles with different access levels
* Provide tracking and reporting of user activities
* Integrate with DMV updates for practice tests and training content
* Ensure data security and user account management

## 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 DriverPass system needs to be web-based and accessible from any internet-connected device. The system should load pages within 2 seconds under normal conditions and be capable of handling up to 1,000 concurrent users without significant performance degradation. System updates, including software patches and new features, should be performed during off-peak hours to minimize disruption and should be completed within 2 hours.

#### 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 run on both Windows and Unix-based servers, with compatibility for major web browsers such as Chrome, Firefox, and Safari. The back end will require a relational database management system to support data storage and retrieval operations.

#### 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?*

* To distinguish between different users, the system will use unique user IDs and will be case-sensitive for usernames and passwords. The system should notify the admin immediately of any inconsistencies or data anomalies, such as duplicate records or invalid data entries.

#### 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 should allow for user management (add/remove/modify users) without requiring code changes. This will be achieved through a user-friendly admin interface. The system should adapt seamlessly to platform updates, with minimal downtime and no data loss. IT admin will have full access to system configuration, user management, and security 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?*

* Users will be required to log in with a username and password. The connection between the client and server must be secured using HTTPS to encrypt data exchange. In the event of a brute-force hacking attempt, the account should be temporarily locked after 5 failed login attempts, with an alert sent to the admin. Users who forget their passwords will have an option to reset it 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 validate user credentials when logging in.
* The system shall allow users to register for an account and schedule driving lessons.
* The system shall enable users to take online practice tests and view their progress.
* The system shall allow admins to manage user roles and permissions.
* The system shall track and log all user activities for auditing purposes.
* The system shall generate reports for user activities, reservations, and test results.
* The system shall send notifications to users about updates from the DMV.
* The system shall enable users to reset their passwords via email verification.

### 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 needs to be user-friendly, accommodating different user roles including customers, admins, IT officers, and secretaries. Customers should be able to register, log in, schedule and modify appointments, and take practice tests through the web interface, accessible via browser on both mobile and desktop devices. Admins and IT officers should have access to a dashboard for managing users, generating reports, and configuring system settings.

### 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 reliable internet access.
* The system will have a scalable infrastructure to handle growth in user base.
* Users will have basic knowledge of using web applications.
* Integration with the DMV for updates is feasible and supported.

### 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's performance might degrade with user numbers exceeding 1,000 concurrent users.
* Limited by the budget and time constraints, some features might be postponed to future releases.

### 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.*

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*A screenshot of a diagram

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