# 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 system design is to provide DriverPass with a secure, multi-tiered platform that supports access for customers, instructors, and administrators. The system will enable DriverPass to deliver structured driving packages, combining online coursework with practical lessons, while ensuring smooth management of accounts, reservations, and reports.

* DriverPass wants a system that allows customers to:
  + Register and manage accounts.
  + Access online classes and practice tests.
  + Schedule and manage on-the-road driving lessons.
* The system should also support administrative tasks, such as tracking reservations, managing accounts, and generating reports.

This system will also integrate directly with DMV updates so that practice exams and training content remain current. Tiered client access will ensure that students, instructors, administrators, and IT staff each have the proper permissions and tools to perform their role.

### 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 problem: many people fail their DMV driving tests due to inadequate preparation.
* Their solution is to offer comprehensive training packages that combine online study materials, practice exams, and in-person driving lessons.
* The system must:
* Provide online access to training content and test preparation.
* Manage reservations for lessons, drivers, and cars.
* Track user progress, test results, and driver feedback.
* Support different user roles (owner, IT officer, secretary, customer).
* Integrate with DMV updates for rules and test questions.
* A description of existing issues (manual scheduling, lack of structured access).
* A note that the new system integrates DMV updates automatically.
* How customers will interact with it (web-based portal, mobile access, practice tests).

### 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?*

**Goal 1:** Improve student pass rates on DMV tests.

**Objectives:**

* Provide access to at least 50 online practice exams.
* Offer tracked progress reports for each student.
* Integrate updated DMV rules monthly.

**Goal 2:** Streamline scheduling and administration.

**Objectives:**

* Allow customers to book, modify, and cancel lessons online.
* Provide administrators with role-based dashboards.
* Generate automated reports weekly.

**Goal 3:** Ensure system security and role-based access.

**Objectives:**

* Provide tiered access rights for customers, instructors, secretaries, IT staff, and the owner.
* Enable secure password reset and automatic account lockout after failed login attempts.

**Goal 4:** Improve administrative efficiency.

**Objectives:**

* Track all reservations, cancellations, and modifications with audit logs.
* Generate downloadable reports (activity logs, schedules, financial summaries) for management.

**Goal 5:** Increase accessibility and reliability.

**Objectives:**

* Provide mobile-friendly access via cloud hosting.
* Guarantee data security and backups to ensure reliable operations with minimal downtime.

## 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 shall operate as a web-based application accessible via major browsers and mobile devices.
* Pages should load within three seconds under normal network conditions.
* The system shall update DMV rules and practice exam content at least once per month.

#### 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 shall be hosted in a cloud environment with support for Windows and mobile platforms.
* The system shall use a relational database (e.g., SQL-based) to manage user accounts, reservations, and training data.
* The system shall integrate with reporting tools such as Excel for exporting data.

#### 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 validate user identity by requiring unique usernames and secure passwords.
* All transactions (lesson bookings, modifications, cancellations) shall be logged with timestamps and user IDs.
* The system shall alert administrators if data integrity issues occur, such as overlapping reservations or duplicate records.

#### 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, disable, or modify training packages without altering core code.
* IT staff shall be able to manage users and permissions directly from an admin dashboard.
* The system shall support future expansion, such as additional DMV exam categories and new training modules.

#### 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?*

* All logins shall require password authentication with encrypted storage.
* Data transmitted between clients and the server shall be encrypted using SSL/TLS.
* Accounts shall automatically lock after five failed login attempts, with recovery available through password reset.
* Administrators shall be able to revoke or update access rights immediately when staff roles change.

### 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 customers to register, update, and manage their accounts.
* The system shall provide online access to practice tests, training content, and progress tracking.
* The system shall allow customers to schedule, modify, and cancel on-the-road lessons.
* The system shall allow secretaries to create or adjust reservations by phone or in-person.
* The system shall track which customer is linked to which driver, car, date, and time.
* The system shall log all activity (reservations, modifications, cancellations) for auditing.
* The system shall provide administrators with dashboards to manage users, lessons, and reports.
* The system shall integrate DMV updates to refresh practice exams and training content.
* The system shall generate downloadable reports (Excel/PDF) for management.

### 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 shall be browser-based with mobile compatibility.
* Customers shall be able to log in, view available lessons, take practice tests, and track progress.
* Secretaries shall use the interface to enter customer information, schedule lessons, and manage reservations.
* Instructors shall use the interface to view schedules and enter driver notes and feedback.
* Administrators/IT staff shall use the interface to manage user roles, update packages, and monitor system activity.

### 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 and staff will have reliable internet access to use the system.
* The DMV will provide timely updates in a compatible format for integration.
* DriverPass will supply the vehicles, instructors, and office staff required to fulfill reservations.
* Users will primarily access the system through modern web browsers and smartphones.

### 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 internet connectivity; offline scheduling and test-taking are not supported.
* Changes to training packages (adding/removing) will require IT/admin configuration.
* The system cannot guarantee DMV acceptance of practice tests beyond alignment with provided updates.
* Budget and timeline constraints may limit advanced features such as live chat support or AI-based coaching.

### 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 project management

AI-generated content may be incorrect.