# 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 system for DriverPass, a company that aims to help students pass driving tests by providing online practice exams and on-the-road training.
* The client, DriverPass, wants the system to allow users to schedule driving lessons, take online practice exams, and track their progress.

### 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 wants a system that allows customers to book driving lessons, take online tests, and access reports about their training.
* The problem they want to fix is that 65% of students fail driving tests because they rely solely on studying past tests. DriverPass wants to provide better training options.
* Components needed include online test-taking functionality, a booking/reservation system for driving lessons, user roles (customers, administrators, trainers), and data tracking.

### 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:
  + Book driving lessons online and through the office.
  + Take online practice exams and view their results.
  + Track their progress and print reports.
  + IT admins should manage accounts, reset passwords, and block users if needed.
  + Management should have full visibility over reservations and changes made to user records.
* Measurable tasks:
  + Implement a secure login and user account system.
  + Develop a scheduling module for lessons and reservations.
  + Integrate reporting features for tracking exam and lesson progress.

## 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 must be accessible via a web-based interface for both desktop and mobile devices.
* It should handle real-time booking updates and data retrieval with minimal latency.
* The system should be updated quarterly or when DMV regulations change.

#### 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 must run on cloud infrastructure.
* The back end should be supported by a relational database, preferably using MySQL or PostgreSQL, to store user and reservation 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 will identify users by unique credentials and role-based access control.
* Input will be case-sensitive for login credentials but not for other input fields.
* The system will notify the admin in case of errors, failed logins, or data inconsistencies.

#### 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?*

* Admins will be able to add or remove users and modify roles without requiring code changes.
* The system will adapt to platform updates by using cloud-based deployment, ensuring compatibility with evolving technologies.
* IT admin requires full access to modify user data and reset passwords.

#### 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 with a unique username and password.
* Data exchange will be secured using HTTPS with SSL/TLS encryption.
* If multiple failed login attempts are detected, the account will be locked, and an alert will be sent to IT.
* Users will be able to reset their passwords via a secure email link.

### 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, log in, and reset passwords.
* The system shall validate user credentials when logging in.
* The system shall allow customers to schedule, cancel, or modify driving lesson reservations.
* The system shall allow users to view and take online practice exams.
* The system shall track progress and allow users to view and print reports.
* The system shall allow admins to block users, reset passwords, and modify account information.
* The system shall generate reports showing test results, lesson schedules, and user activity.

### 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 must be web-based, accessible via browsers and mobile devices.
* Users:
  + Customers will book lessons, view progress, and take exams through the interface.
  + Admins will manage user accounts, generate reports, and track system usage.
  + Trainers will view schedules and enter notes about driving lessons.
* Users will interact with the system primarily through forms (for registration, scheduling) and tables (for viewing progress and test results).

### 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 users will have internet access when interacting with the system.
* The system will not support offline data modifications to avoid redundancy.
* Users will be familiar with basic computer operations, such as using a web browser.

### 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 ability to customize training packages will be limited; only system analysts or developers can add or remove modules.
* The system must rely on the DMV to provide updates for tests and regulations.
* The budget and time constraints limit the inclusion of certain advanced features in the first version (e.g., AI-based driving test evaluation).

### 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.*

