# 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?*

DriverPass, the new client, aims to offer a system where users can take online classes and practice tests to help them prepare for their driving exams. In addition to these digital resources, users will also have the option to schedule in-person driving sessions with DriverPass staff for hands-on, on-the-road training.

### 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?*

The owner wants DriverPass to fill the gap in the market for a more efficient and effective driver training solution. The system should support student drivers in passing their exams by offering online classes, practice tests, and the ability to schedule hands-on driving sessions.  
  
Additionally, DriverPass must allow users to book in-person training, access online learning tools, and take practice tests. At the same time, the system should enable the owner and IT team to monitor appointments, maintain 24/7 access to user data, and ensure compliance with current DMV regulations.

### 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?*

* DriverPass should enable users to book appointments directly through their accounts, giving them the flexibility to select their preferred date and time.
* Users should also be able to modify or cancel their appointments from within their personal profiles.
* The system will offer three on-the-road training packages for users to choose from, catering to different learning needs.
* DriverPass should implement role-based access control, providing different permission levels for user types—such as full access for admin and IT staff, and limited access for student users.

## 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 built on a cloud-based web platform to enhance the security of user data.
* It must operate smoothly and efficiently, ensuring users have fast and seamless access to all available features.
* Regular updates should be supported to keep the system aligned with the latest DMV rules and regulations, maintain strong data security through code and IT updates, and allow for ongoing maintenance.

#### 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 compatible with multiple platforms—including Windows, Linux, macOS, and mobile devices—to ensure broad accessibility and usability.
* The website must be responsive, automatically adjusting its layout to fit various screen sizes on mobile devices.
* A cloud-based database is recommended for the backend to securely store user information and support scalability.

#### 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?*

 Each user must have a unique username or email address along with a password to clearly identify individual accounts.

* Both the username/email and password inputs should be case-sensitive to enhance security.
* If a user exceeds the allowed number of failed login attempts, the system should automatically alert the admin and IT team to flag a potential security threat.

#### 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?*

* IT administrators should always have full access to all code and system components to monitor performance and quickly address any bugs or technical issues that may arise.
* In the event of a problem, IT must be able to promptly detect and resolve it to maintain system stability.
* IT admins should also have the ability to add, remove, or modify user accounts as needed to ensure only authorized users have access.
* The system should be capable of automatically adapting to platform updates, ensuring compatibility with the latest versions and continued smooth operation.

#### 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 users should log in using a secure, self-set username and password, with multi-factor authentication enabled to enhance security.
* If a user forgets their password, they should be able to click a reset link that sends a temporary password to their registered email, allowing them to create a new password.
* In the event of a brute-force attack, the affected user account should be locked immediately.
* The user must contact IT support or customer service to regain access and will be required to verify personal details such as phone number, email address, or zip code.
* To maintain a secure connection and data exchange between the client and server, all data should be managed via a cloud-based system, which also provides enhanced overall data security.

### 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 during login.
* Enable users to register for and participate in online classes Practice tests and In-person on-the-road training
* Allow users to view instructor profile and credentials
* Provide users with a progress chart for classes, tests, and training that should include instructor notes and observations.
* Allow the instructor to track student progress and allow them to leave notes/give feedback.

### 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 system must support access from various internet-connected devices, including mobile phones, laptops, desktop computers, and tablets.

User roles are divided into two primary categories: IT/administrators and consumers/customers. IT and administrative personnel require full system access to perform updates, modifications, and maintenance as needed. In contrast, consumers and customers are granted limited access, restricted only to essential functions such as registration, course enrollment, and progress tracking to prevent unauthorized changes to the system.

Since the application is currently web-based, all user interactions must take place through a browser.

### 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 access to an internet-enabled device (e.g., mobile phone, laptop, or computer) and a stable internet connection.
* Users will securely log in using a unique username and password.
* Users will be able to complete practice tests and attend online classes through the platform.
* Users will have the ability to schedule and manage in-person hands-on training sessions as needed.

### 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?*

* Time constraints:

While the project schedule (including the Gantt chart) outlines estimated timelines for task completion, actual progress may be affected by Limited developers, technological challenges, and budget which all can delay deliverables.

* Limited resources:

The development of the system faces significant resource constraints that could impact project execution. First, budgetary restrictions may limit the ability to hire sufficient skilled personnel, including developers, testers, and project leaders, all of whom need to collaborate closely to ensure timely and functional delivery. Additionally, the costs are associated with necessary technology, such as multiple operating system licenses, development platforms, IDEs, and testing tools. All these could strain financial resources. Compounding these challenges, the project requires specialized expertise to handle cross-platform compatibility and integration, making it dependent on both adequate funding and highly competent team members. These interconnected limitations in staffing, technology, and budget create potential bottlenecks that could hinder development progress.

### Gantt Chart

A screenshot of a computer

AI-generated content may be incorrect.