# 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?*

* Our consulting company aims to develop a comprehensive system for DriverPass to enhance their customer service and operational efficiency. DriverPass, led by its owner Liam, seeks to address the gap in effective driver training by offering a robust solution that integrates online classes, practice tests, and on-the-road training. The system must enable users to create and manage driving lesson reservations, access training materials, and track their progress while allowing administrative management and security oversight by company staff.

### 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 has identified a significant issue in society: many individuals fail their driving tests at the DMV due to inadequate preparation. To solve this problem, DriverPass intends to provide students with comprehensive training options. This will include a system capable of handling online learning, scheduling driving lessons, and offering DMV rule explanations and practice tests. The ultimate goal is to streamline the process for students and improve their chances of passing the DMV tests by providing flexible, accessible, and high-quality training resources.

### 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?*

* **Online Class Integration**: Provide a platform for students to access online training materials and practice tests, including progress tracking with details such as test names, times taken, scores, and statuses (e.g., not taken, in progress, failed, passed).
* **Reservation System**: Allow customers to schedule, cancel, and modify driving lesson reservations online or via phone, with automated identification of the associated driver, car, date, and time.
* **Training Packages Management**:
  + Offer customers a choice of three training packages:
  + **Package One**: Six hours of in-car training with a driving instructor.
  + **Package Two**: Eight hours of in-car training with a driving instructor and one in-person lesson on DMV rules and policies.
  + **Package Three**: Twelve hours of in-car training, one in-person lesson on DMV rules and policies, and access to an online class with additional content and practice tests.
  + Provide flexibility for the company to disable any package temporarily, preventing new registrations for that package when necessary.
* **Data Accessibility**: Ensure that company data can be accessed online from any computer or mobile device, and provide the capability for offline access to downloadable reports.
* **User Role Management**: Implement differentiated access rights for various company roles, such as full account management for IT officers to reset passwords and restrict access as needed.
* **Activity Tracking**: Include robust tracking features to log user actions (e.g., who made or modified reservations) and print activity reports for accountability.
* **DMV Compliance Updates**: Enable connectivity with DMV systems to receive notifications of updates to rules, policies, or test content, ensuring training materials remain current.
* **User Management Interface**: Design an intuitive web-based system to minimize technical issues and streamline business operations, aligned with DriverPass’s preference for a cloud-based solution for security and backups.

## 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 a cloud-based web application.
* The system should deliver fast and seamless access to users without any complications.
* The system must support updates whenever the client decides to introduce new features.

#### 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 platform should operate on Linux to enable the implementation of enhanced security measures.
* The system will leverage cloud infrastructure to manage all security aspects, including the handling of databases required for the backend.

#### 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?*

* Users must create a unique ID by providing a case-sensitive username and password when accessing the website for the first time. The system should incorporate multi-factor authentication methods (e.g., reCAPTCHA, two-factor verification, and login key authenticators) to enhance account security and reduce the risk of hacking.
* The system should promptly notify the client of any issues, allowing them to report glitches or bugs to ensure the website is quickly restored to full functionality.

#### 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 will enable user modifications and removals without requiring changes to the underlying code.
* The system will be designed to accommodate updates whenever additional features are needed.
* The IT administrator will have full access to the system, allowing them to make necessary changes or revoke access for former employees as required.

#### 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 must log in with a username, password, and multi-factor authentication for enhanced security.
* The cloud will facilitate data exchange between the client and the server.
* To prevent brute force attacks, the system should automatically disable an account after three consecutive incorrect login attempts.
* If a user forgets their password, they will be prompted to provide the email address associated with their account, and a password reset link will be sent to that email.

### 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.”*

* Users will be able to book reservations through the system.
* The system will offer access to practice tests and classes.
* Customers will be able to see the driver assigned to them.
* Access within the system will be tailored to each user's role and permissions.
* Users will have a clear view of the tests and tasks they have completed.

### 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 should enable customers to schedule driving appointment packages, access online classes, and complete tests.
* DriverPass employees should have the ability to update and modify the system as needed through the interface.
* Users must be able to access and interact with the interface from any internet-enabled device, including mobile phones, laptops, and desktop computers.

### 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?*

* Since no specific budget was provided for the system, we are operating under the assumption that all necessary components for building the system will fall within an acceptable budget range.
* We are also assuming seamless access to the required technology and resources.

### 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?*

* We have an estimated timeline of four months to develop this system, but no specific budget has been allocated.
* A significant challenge at this stage is the limited number of team members available to build the website. Additional staff will be necessary to complete the project within the five-month timeframe.
* Adopting an Agile methodology would be the most effective approach for this project.

### 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 screen shot of a gantt chart

Description automatically generated