# 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 objective of this project is to create a complete system for DriverPass, which intends to enhance driver training.
* Liam, their customer, has requested a training system that includes online practice exams, in-person live driving scenarios on the road and practice tests.

### 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 an aim to address the deficiencies in training and preparation material for DMV driving tests with the system.
* DriverPass has a particular focus on tests to having online practice exams and a way to schedule an on the road training session.
* These classes are accessible on the system, and a booking tool is used to schedule participation in online practice tests and on-the-road training sessions, all to improve the student’s success rate.
  + Components needed for the system:
    - An online platform for the practice exams as well as educational material.
    - A booking tool that allows users to schedule on-the-road training sessions
    - CRM or data/client tracking system to manage booking reservations as well as track the progress through material of an online user.

### 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?*

* Develop an interface for users to access practice exams and educational materials relevant to driving tests. Implement features for users to take practice exams, view educational content, and track their progress. Measure the system's success by the number of users accessing practice exams and educational content, as well as their feedback on the effectiveness of the materials.
* Create a scheduling system that allows users to book on-the-road training sessions based on their preferences and availability. Implement features for users to view available training slots, select instructors, and manage their bookings. Measure the system's success by the number of successful bookings made by users and the efficiency of the scheduling process.
* Develop a comprehensive database system to store user information, session reservations, instructor assignments, and progress tracking data. Implement features for administrators to view and manage user data, track user progress, and monitor reservation statuses. Measure the system's success by the accuracy and completeness of the data stored, as well as the ease of access and management for administrators.
* Design the system architecture to be scalable, allowing for future expansion and integration of new features or modules. Implement modular components and flexible APIs to facilitate easy integration of future enhancements. Measure the system's success by its ability to accommodate future changes and enhancements without requiring significant redevelopment or disruption to existing functionality.
* Implement robust security measures to protect user data, including encryption, authentication, and access controls. Ensure compliance with relevant regulations and standards, such as GDPR for data privacy and security. Measure the system's success by its ability to safeguard user data and ensure compliance with applicable regulations and standards.

## 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?*

* This system will need to be run in web-based environments that are accessible from internet browsers and mobile devices.
* The system needs to sync quickly with minimum latency and ensure the data is updated for the user regularly to ensure optimal performance.

#### 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?*

* This system needs to be able to be supported by all operating systems, such as Windows, macOS, Linux and mobile operating systems.

#### 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 will need unique sign on IDs to be distinguished between others.
* The input will need to be case sensitive where applicable.
* If there are any data discrepancies or when errors are detected, the system should send a notification to an admin as soon as it’s received.

#### 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?*

* This system will need to allow users to make modifications through an admin interface pertaining to their account information.
* When platform updates are needed, the system should adapt quickly to these updates.
* The IT Admins need full access to be able to modify and maintain the system.

#### 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 need to use a unique username and password to log into the system, and they can set multi-factor authentication to ensure better security measures.
* Having secure connections with the usage of HTTPS and encryptions for these data exchanges.
* There will be implementations to protect the system from “brute-force” attacks, such as account locking after failed sign-in attempts.
* Additionally, a password reset mechanism should be implemented if a user forgets their sign-on password.

### 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 during login.
* The system shall allow users to schedule, modify, and cancel on-the-road training sessions.
* The system shall provide users with access to online practice exams and track their progress.
* The system shall generate and download user reports in formats like Excel.
* The system shall allow admin users to manage user accounts and permissions.
* The system shall log user activities for tracking and reporting purposes.

### 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 cater to multiple user roles, such as Admin, IT Officer, Secretary, and Customer.
* Admin and IT Officer need to be able to manage accounts and monitor the system’s performances.
* The Secretary must be able to manage booking as well as user inquiries.
* Customers will need to be able to book training sessions, take training exams, as well as track their overall progress.
* This system will be web-based and accessible from browsers and mobile devices.

### 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 a primary internet connection and be familiar with maneuvering website interfaces.
* The system will be deployed on a secure cloud platform to help ensure availability and reliability.

### 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?*

* Limited budgets, as well as time constraints, may impact initial system features.
* Potential integration challenges may pose an issue with updating real-time updates from the DMV site.
* Dependency on internet connections for full functionality, without the system is inaccessible.

### 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 chart

Description automatically generated