# 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 client for this project is DriverPass.
* The purpose of this project is to provide driving students with access to online practice tests.
* This project will also offer online classes and the ability to schedule in-person driving lessons.
* The project should offer different packages that the users can buy for access to the different services.

### 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 system provides online training to help students have more success on their driving tests.
* The system should allow students to schedule in-person driving lessons.
* The system should stay up to date with all DMV changes.
* DriverPass wants to provide a potential solution to the high rate of driving test failures.
* The components the system will need are:
  + User Management and Roles
  + Online Classes and Tests
  + Scheduling system
  + DMV integration
  + Customer Accounts and Payment processing

### 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?*

* Allow the creation of user accounts and allow users to log in.
* Allow users to take online learnings that stay current with DMV standards.
* Allow users to schedule in-person driving lessons.
* Allow users to purchase packages of different tiers.
* To achieve this:
  + The system should have different User Roles for customers, administrators, and secretary
  + Online Learning Modules
  + A dashboard so students can track their progress
  + A reservation system for the in-person driving lessons
  + DMV integration to notify of any updates
  + Payment Processing
  + An Audit Log

## 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 is web based.
* The system must be accessible from both desktop and mobile browsers.
* The web pages should be loaded within 2-3 seconds.
* The system should be updated to match DMV standards as quickly as possible.
* Any other maintenance updates should be completed as need.

#### 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?*

* On the server side the system should be on a cloud platform per the client.
* On the client’s side the system should be accessible from any web browser.
* The system will need a database to handle user information, online lessons, progress made per user, payment information, and scheduling for in person lessons.
* The system will need an API to connect with the DMV.
* An alert system is needed to inform of any changes made by the DMV.
* A calendar system will be needed to handle the scheduling.
* An audit log is needed to see who made changes.

#### 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 should register with their personal information and a password
* Each user should create a unique username and password.
* The username and email address field should not be case sensitive.
* The password field should be case sensitive to allow users to create stronger passwords.
* Admins should be alerted if an account fails an excessive number of logins within a short period of time.
* Admins should be alerted if there is an issue with the database or API.

#### 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?*

* With proper user management, changes to the system can be made to users without changing code.
* Using separate modules for each service would allow them to be updated independently of each other, meaning that updates could be done as needed instead of all at once.
* Testing can be done to ensure that updates do not break critical infrastructures.
* Using a cloud-based platform, security updates and back-ups can be automated to help prevent data loss.
* IT admins will need to have complete access to the system. This would allow them to access user management, security, the database, and apply updates.

#### 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 their usernames or email address and a secure password to log in.
* Being web based the system should utilize HTTPS for secure data transfers.
* A system should be put in place that locks accounts after too many failed log in attempts within a short period.
* The IT admin should also have the ability to block accounts of ex-employees, as requested by the client. This could extend to blocking accounts that have suspicious activity.
* An alert system could be utilized to inform the IT admin of suspicious activity or accounts that have been locked.
* Users should be able to reset their password’s automatically or by contacting the IT admin to reset it for them.

### 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 passwords to be reset.
* The system shall allow driving lessons to be reserved and modified.
* The system shall allow users to take online classes.
* The system shall allow users to purchase packages of services.
* The system shall allow packages to be created or disabled.
* The system shall track and notify admins of any DMV changes.
* The system shall track user progress and display this information on a dashboard.
* The system shall record all actions and changes.
* The system shall be useable on desktop and mobile browsers.

### 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.)?*

* Customer
  + Ability to make and modify reservations
  + Ability to take Online tests and view their progress
  + View and edit Customer information
  + Password rest
* Secretary
  + Ability to make and modify reservations
  + View and edit Customer Information
* Driver
  + View lesson schedule
  + Lesson tracking
  + Create Driver comments
* Admin
  + Manage users
  + Monitor activity
  + Enable, create, and disable packages
* IT Officer
  + Reset passwords
  + Monitory security
  + Configure system settings
  + Block accounts
* Customers, the secretary, and drivers will interact with the system through a web browser.
* The administrator or IT officer will interact with the system either through a web browser or a web-based interface.

### 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?*

* A payment gateway will be implemented to properly handle payment processing.
* A method for the customers to contact the IT office to reset their password or other support-related issues will need to be added.
* Users are expected to have some degree of computer literacy.
* Users are expected to have a device that will allow them to access the system.
* A system for the admin to download reports to be viewable offline.
* A plan for handling and protecting sensitive user data will need to be implemented.

### 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 requires internet access to utilize.
* The DMV changes will need to be manually updated, which can lead to outdated material if not changed quickly.
* Using an API to access the DMV may run into issues if the DMV systems ever have disruptions.
* Packages cannot be added or removed without the help of a developer.
* The client did not provide any specific limitations on budgets, resources, or time.
* Non-customer users will need to be trained on how to properly access the system and utilize their available tool set.

### 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 calendar

AI-generated content may be incorrect.*