# 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 develop a comprehensive, web-based training and scheduling system for the client, DriverPass.
* The client wants a system that allows their customers to register for driver training packages, take online practice exams, and schedule on-the-road driving lessons.
* The system must also provide administrative capabilities for DriverPass staff to manage customers, appointments, and company data.

### 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 aims to solve the problem of high failure rates for driving tests at the DMV by providing better, more accessible training for student drivers.
* The proposed solution is a centralized system that offers both online educational content (practice tests, materials) and a robust tool for scheduling in-person, on-the-road training sessions.
* The system will need several components: a customer-facing website for registration and scheduling, an online learning portal, and a back-end administrative dashboard for staff.

### 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 will allow customers to choose and register for one of three distinct training packages.
* A measurable goal is to have the online registration and payment process be completable by a new user in under five minutes.
* The system will provide a secure portal for customers to schedule, view, modify, and cancel their on-the-road training appointments.
* The system will provide an administrative dashboard for the secretary to manage appointments on behalf of customers.
* The system will track and log all modifications to appointments, identifying the user who made the change, to ensure accountability.
* The system will allow the IT officer to manage all user accounts, including password resets and blocking access.
* The system will provide the owner with downloadable activity reports to track business operations.

## 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?*

**Performance Requirements**

* The system must be web-based and accessible from any modern computer or mobile device.
* The system should allow the owner (Liam) to download reports that can be worked on offline in spreadsheet software like Excel.

#### 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 be cloud-based, as the client does not want to manage their own servers, backups, or security infrastructure.
* The back end will require a database to store all customer, appointment, and package information.

#### 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 must accurately track all changes to reservations, including who made the change and when it occurred.
* The system must clearly distinguish between different user roles (Owner, IT Officer, Secretary, Customer) and enforce their respective permissions.

#### 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 owner (Liam) must be able to disable training packages to prevent new registrations for them, though adding entirely new packages will still require a developer.

#### 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?*

* User access will be controlled through a role-based security model.
* The system must provide a secure, automated method for customers to reset their passwords if forgotten.
* All connections and data exchange between the client and the server must be secured.

### 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 new customers to register by providing their first name, last name, address, phone number, and credit card information.
* The system shall validate user credentials (username and password) upon login.
* The system shall allow customers to select and purchase one of three available training packages.
* The system shall allow customers to schedule two-hour driving lessons on a specific day and time.
* The system shall allow both customers and the secretary to modify and cancel existing appointments.
* The system shall assign a specific driver and car to each scheduled lesson and track this association.
* The system shall provide an online learning portal for customers who purchase Package Three, including course materials and practice tests.
* The system shall track and display the status of each practice test for a student (e.g., not taken, in progress, passed, failed), along with their score.
* The system shall receive notifications from the DMV regarding new rules or policies and display them within the system.
* The system shall allow the owner to generate and print an activity report to identify which users are responsible for specific actions (e.g., modifying a reservation).

### 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 will be a website accessible from standard web browsers on both desktop and mobile devices.
* The different users of the interface are:
  + **Customer/Student**: This user will need to register, log in, select packages, schedule/modify lessons, access online learning materials, and take practice tests.
  + **Secretary**: This user will need to be able to access customer accounts to schedule, modify, and cancel appointments on their behalf.
  + **IT Officer**: This user needs a high-level administrative interface to manage all user accounts system-wide.
  + **Owner**: This user needs access to reporting features and the ability to manage the availability of training packages.
* The customer-facing interface design will be based on the sketch provided by Liam, including sections for "Online test progress," "Information," "Driver notes," and "Special needs."

### 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 (both customers and staff) will have access to a device with a modern web browser and a reliable internet connection.
* It is assumed that a technical mechanism (such as an API) exists to allow the system to "be connected to the DMV" for updates, as requested by the client.
* It is assumed that DriverPass has an internal business process for assigning available drivers and cars to scheduled lessons.
* It is assumed that customers will have a valid credit card for payment upon registration.

### 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 will not allow a non-developer to create new training packages or fundamentally alter the structure of existing ones; it will only allow the owner to enable or disable them.
* The system does not support direct modification of data while offline; data must be accessed and modified while the user is online. Only downloaded reports can be viewed offline.
* The initial version of the system will be limited to the features explicitly discussed in the interview transcript.

### 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.*

