# 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’s purpose of the project is to create a product to assist users with passing driver's tests.
* Allow users to take online classes, practice tests, or have in-person driving practice. In-person lessons must have a reservation.
* The system must allow reservations online, by phone, or by visiting the office directly.

### 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 wants its system to provide better driver training to reduce the number of people failing their driving tests at the DMV
* This is accomplished through online classes, practice tests, or optional in-person driving lessons.
* There needs to be a database to hold user records
* A website that allows users to sign in and view their progress, as well as cancel or modify their reservation.
  + Cloud-based, if possible, for ease of use and security

### 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 should allow for the creation of user accounts with the following specifications:
  + First Name, last name, address, city, state, zip, phone, email. If the user takes part in the services, the payment method.
  + Access to reset the password if forgotten
* If the customer wants in-person lessons, they can select one of the offered packages.
  + Higher level access to disable packages
* Website to display user progress and allow access to the online courses, practice tests, and registration.
  + Allows input from drivers for comments about the in-person practice.
  + Users can modify appointments directly on the website
* Allow registration to be made online, in person, or by calling.
* Database with different rights and roles.
  + Hierarchy with the IT manager and the boss to have the highest privilege
  + The secretary should have access to modify any user's appointments
  + Users should be able to modify their appointments
* Connect to DMV to ensure up-to-date information
  + Get Notifications for changes
* Track which user is with which driver
  + Time
  + Driver Name
  + Car
* Track all the modifications of an appointment.
  + Who made it
  + If applicable, who canceled it
  + Who modified it last

## 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 client wants the system to be web-based so that it can be accessed from anywhere. The system should run fast enough that any reports or information the user wants to access are available quickly. The system should be updated frequently. When the DMV releases new rules, policies, or sample questions, it would prompt an update.

#### 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 cloud-based, so depending on the provider, the servers could be Linux or Windows. In our project, we want our provider to deal with most of the backend work, so AWS or Azure would work as a “hands-free” backend. These cloud services also provide cloud databases that we would take advantage of.

#### 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 will create an account using a username and password. The username would not be case-sensitive, but the password would be. Once the account is created, the user can be assigned different roles, but it defaults to student. The system should notify the admin of a problem if a specific account fails the password multiple times or if numerous logins are made from different geographical locations.

#### 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?*

* Yes, changes can be made to user accounts through the database. Using an encrypted database, we can store the user role, password, username, and other such information. The user should only be allowed to alter their information, while the IT admin should have administrator control and can modify any user's access levels. The system will be able to adapt to platform updates because database information is not overwritten during 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?*

* The standard username and password system should be used such that one username has one password. The connection to the server should run on HTTPS, which provides encryption between the user and the server, providing significant security. This provides against most man-in-the-middle attacks. In the case of a “brute force” attempt, each username should only allow five password attempts before locking the account and notifying the IT team if this happens for multiple accounts within a short time. The user will be sent an email with instructions on how to unlock the account. If the user forgets their password, they can click a “forgot password” button to receive an email link to reset the 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 allow input for student information
* The system shall notify the admin when the DMV updates its policies
* The system shall allow the customer to schedule appointments
* The system shall allow users to reset their passwords automatically
* The system shall offer three different packages

### 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 needs to show online test progress, user information, accommodations, any driver's notes, and both the driver's photo and the student's photo. The users include the drivers, admins, students, and other staff. The student will have access to all previously listed items. Drivers will have the option to add notes, and staff will be able to modify specific fields to assist with any issues. Admins will be able to perform all of the tasks mentioned before and have access to add or remove employees and any other administrative functions. The user can interact with the interface on any device that can access the webpage and has an internet connection.

### 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?*

* The assumptions not addressed above relate to the users having a device and an internet connection to load the web page. I am also assuming that the user is technologically literate enough to navigate the page.

### 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?*

* Some of the limitations of this project include the fact that users must have a device and internet so that they can view our web pages. Although you can schedule appointments over the phone, you lose functionality without the devices and the internet. Budgetary limitations could include the cloud server and its future cost with scalability. Although we have 3-4 months to complete the project, the DriverPass scope was not entirely clear, which could lead to additional tasks being requested.

### 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 graph with purple rectangular boxes

Description automatically generated with medium confidence*