# 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 is DriverPass and their goal is to fill the void in the market of driving trainer supports. They need us to design a system that would provide customers with access to online classes, practice tests, and the ability to set an appointment for on-the-road training.

### 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?*

* Needs to be easily accessible online at all times.
* Needs the ability to provide in person and online classes, and practice driving tests to students.
* Needs a reservation method that allows customers and company employees to book one of the 3 packages and the in person driving classes. This method also needs to allow for modifications of the schedule.
* Needs a user authentication and authorization that allow different access and abilities based upon the user’s roles. (The owner role has unlimited access; other roles are limited.)
* The owner needs the ability to manage all accounts, (reset passwords, block accounts, and restrict access) and manage the reservations and packages.
* Needs to be connected to the DMV to keep rules, policies, and practice tests up to date.
* Needs to be a easy to use UI system.

### 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?*

* When the product is complete, the system should be able to accomplish the goals and objectives set by the client , including – assisting users in scheduling in person lessons and providing accessibility to online lessons. The website will also allow for the students to be able to adjust their appointments.
* The employees will also be able to use the system to schedule and adjust reservations. The owner will be able to control the entire system and remove any package, modify user access, view student and driver information, and track changes made within the system.

## 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?*

* System needs to be able to run in a web-based environment, over the cloud would be best.
* Needs to run quickly so duplicate appointments cannot be made and so the user can see what appointments and drivers are available in real time.
* Test scores need to be immediately available upon finishing a test.
* System needs to be updated frequently and consistently.
* Admins must be able to modify the driving packages as needed.
* Needs to stay up to date with DMV compliance and must be updated to remain compliant.

#### 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?*

* System should run on Windows and utilize Amazon web services for cloud computing.
* Requires a database for storing customer and driver information, the number of tests taken and their scores, driver notes, and previous driving 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?*

* Each user profile will have an assigned role.
* The roles will be student, driver, staff, and admin.
* Roles will be assigned when the account is registered.
* The input will be case sensitive.
* The admin will be informed immediately of any problems within the system, such as a user getting locked out of their account.

#### 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?*

* You can make changes within the changing code.
* The staff and admin roles can assist with adding or modifying student role, but only admin can remove user or add/ remove/ modify staff and driver roles.
* The system will be able to keep the same information in databases so even when the platform updates, the information will remain the same.
* IT admins will need complete access to the system so they can troubleshoot with all roles of the company.

#### 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?*

* Username and password need to be case sensitive, with 2 factor authentication in order to use the platform.
* Data needs to be encrypted before sending it to the server, to ensure a secure connection, using HTTPS and continually monitoring for security system updates.
* If the user inputs an incorrect password 5 times, then the account gets locked for 30 minutes and an alert gets sent to both admin and student. This can help with “brute force” hacking attempts because it slows their ability to try and get into the account and alerts the admin.
* 2 factor authentication also assists keeping out hackers because even if they find out the password, they won’t have access to the second form of authentication, and it will alert the user that someone is attempting to access their account.
* If the user forgets their password, then they will have to enter their username and email address. If the information matches what is on file, then the user will be sent an email with a link to reset their 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 the student to take a driving knowledge test.
* The system shall allow the student to make an appointment to drive with an instructor.
* The system shall validate user credentials when logging in.
* The system shall lock customer accounts after 5 incorrect password attempts and alert the user and admin.
* The system shall track available appointments and scheduled appointments to avoid conflicts.
* The system shall schedule customer appointments in response to orders placed.

### 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.)?*

* Interface needs to be web-based and work/adapt depending on is the user is on a desktop or mobile device.
* Admin users will require access to scheduling and appointment making.
* Customer users should have access to their account information, orders, and package information.

### 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 have access to a device that has cellular data or Wi-Fi.
* It is assumed that users have access to email and a web browser.
* It is assumed that an API can be used to track changes made from the DMV.

### 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?*

* Client timeframe – 15 weeks
* Frontend design must be compatible with all major web browsers.
* Changes to DMV regulations or web browsers could occur at any point.

### Gantt Chart

A screenshot of a project schedule

Description automatically generated