# 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 allow me to get use to planning out a potential system from a customer and reach all their needs. The client, DriverPass, wants to the system to provide students with access to online practice exams and on-the-road training to better prepare them for driving 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 wants the system to provide students with access to online practice exams and on-the-road training to better prepare them for driving tests.
* The problem they want to fix is to improve driving training.
* Components Needed:
  + Access to data from anywhere;
  + Proper access to data based on company roles;
  + System tracking;
  + Run over the cloud;

### 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?*

* Overall, the system should be able to provide users and a way to schedule and manage their reservations they set with DriverPass. DriverPass should be able to see these reservations and apply the proper training based on the information.
* User Experience:
  + Be able to create an account;
  + Create Reservations;
  + Modify / Cancel Reservations;
  + See Scheduling w/ specific Driver;
  + See Test Progress;
* Authorized DriverPass Users:
  + Full Access to data;
  + Download reports of users in excel format;
  + Allow access to update passwords and mange user access;

## 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 system needs to be able to run on browsers and mobile devices that all support Windows, Linux, and macOS. The system should be able to always maintain an efficient speed. 200 milliseconds for user actions is acceptable. They system also should be able to handle high traffic that is scalable. When it comes to updates, there should be regular maintenance that occurs monthly to fix any bugs and make minor improvements. There should be feature updates that occur quarterly to potentially add new features and overall improve performance. Any security updates or user suggestions should be on an as needed basis.

#### 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 able to work on the three main platforms, WINDOWS LINUX and macOS. To ensure that happens, the backend and frontend of the code need to be accessible for each platform. For example, we could utilize MySQL to access databases, and we could use Python depending on the framework we wish to work with. Just to name a few tools.

#### 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 have a unique username to distinguish between different users. This would mean inputs for usernames and passwords are case-sensitive. When any of the security measures pop up. For example, if an account gets locked out because too many login fails, the admin should receive a notification in order to see if there is relation of past break attempts and they can act accordingly.

#### 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?*

* To allow this, the IT and admin users will have access to the databases where they can directly change any of the data without changing the code. To make for easy updates, the system will be created with modular components to ease the updates. For example, we could use microservices for different functionalities.

#### 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?*

* For the user to login, they must create an account that is associated with a username and password. To ensure the connection between client and server is secure, we will use HTTPS to encrypt the data between the two. We will also use Two-Factor authentication to make sure accounts are secure. To ensure there is no “brute force” attacking, there will be a login limit. If you were to fail to login for so many attempts, you will receive a login ban, that could become permanent. If a user forgets password, we will include a password reset link that will send confirmation to the user’s email, you will also be able to call the company directly to get a password reset, if you provide the proper information to confirm,

### 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 should allow for user creation
* The system should validate user credentials when logging in
* The system should allow for user to update user information (payment options, contact info, personal information)
* The system should allow for user data to be stored
* The system should allow users to have access to scheduling for training
* The system should allow users to view their training progress
* The system should allow for users to find the contact information of instructors
* The system should allow for users to view any comments left from instructors
* The system should allow for admin users to access user database
* The system should allow for admin users to makes comments on user accounts
* The system should allow for admin users to update progress for users
* The system should allow for admin users to update any scheduling changes

### 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 user interface should be an efficient and simple looking interface for allow users to easily maneuver around the website to look at all their information that the app offers. Within the interface, there will be two types of users, clients and admins. Users will need to be able to schedule their training, see their progress, be able to contact their instructors, update any payment or account information, and see any comments that may be made on their account. Admin users, which include the instructors, employees at the company, and IT, should be able to access all users’ schedules, post comments on users’ accounts and be able to contact the users. The interface must have the compatibility to be used on both mobile and browser 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 have Access to Internet
* Users are of age to get training
* Users have all information needed to create account
* Users have the financial ability to pay for training

### 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?*

* Budget – making sure we have the proper funds in order to create the system the customer wishes.
* We need to make sure we have enough space in order to hold all the data. We will use a cloud form of data storage to do this.
* Must have constant updates to the system to ensure it runs smoothly with any technological updates in the future.

### 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 diagram with multiple steps

Description automatically generated with medium confidence*