# 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 help with the issue that is occurring today. People are failing the drivers’ test and one of the main things that contribute to this is lack of education when it comes to driving. The client is DriverPass, and they want to fill in the gaps when it comes to driving education to help drivers get on the road.

### 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?*

* As referenced earlier, DriverPass wants to help the group of drivers who have a hard time in their exams and give them on the road training to give them experience.

### 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 be able to give a platform to drivers where they can access driver education and give them the ability to be able to drive on the road. Tasks like reserving an appointment to get on-the-road training, access practice tests.

## 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 should be perfectly fine running on a website. The client wants to access the website from almost any device and using a browser can help achieve this requirement. The system should run pretty quickly and be responsive, but speed is not a top priority in a system such as this. The system should be updated as the policies of the DMV change. These changes must be applied quickly to comply with the state.

#### 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?*

* Among the main 3 OS, Linux is the most reliable. This OS is highly customizable with only the necessary processes needed to run the server. The system will require users to create their own profiles to access their personalized experience. To fit the needs of the users, a database that stores user’s profiles is essential.

#### 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?*

* To distinguish between different users, each user must have their own login ID and password. You can also have many types of users and change the functions available depending on the type of user. For example, the customer user can have the ability to reserve their appointments while the administrator user can access the customer’s personal login information to help them get back into their account. To keep accuracy to the maximum, the user login credentials would have to be case-sensitive. This mainly concerns security as it helps keep passwords more secure. There should be a help system where a user can submit a technical ticket if they are having any issues with the system. The tickets will then be put in a queue where the admins will have to collect the tickets in order and work on them. These issues can be from retrieving a lost password to accessing information for the user.

#### 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?*

* A good system should have aspects that are modular and gives the IT administrators more power to manipulate objects or instances. Of course, you still need to consider the scope of the system. Creating a more sophisticated system like that can require more resources and time than is allowed. Considering the platform, we are working on, which is Linux, using Debian as an example, updates take a lot of time to be tested properly to maintain stability. For the system to adapt to platform changes you will have to code it to be flexible and avoid coding it in such a way that’ll be messy. Object-oriented programming tends to be the preferred method since it creates a situation where if one object goes down then the rest will still be okay. If an aspect of a system goes down, then you can isolate that aspect and reintegrate it once it has been solved. The IT admin needs access to the database. As stated with the client, the ability to add, remove, or modify modules will be considered for later iterations.

#### 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 user is required to login with their user ID and password. Nowadays with new hacking techniques a login and password alone are not enough so a 2-factor authentication should be implemented by using a text authentication where the user is sent a code via text to enter in their account. By using HTTPS, you can encrypt the messages being sent in between the client and server. You want to be secure enough where it won’t ruin the user’s experience using your website, so I believe that the user ID, password, and text authentication is enough with each added layer comes more security but add any more and it can hinder the user. If the hacker happens to brute their way into getting the user’s login ID and password it still won’t be enough. The only way to truly get into the user’s account is for the person to have their cellphone in their possession at the time of a login attempt. If the user forgets their password there are two ways where they can retrieve it. The first way is to put in a ticket for the IT admins to help the user. Not everyone is tech savvy, especially the older customers, so they might require some more assistance in retrieving their passwords. The second method is the most common method and more secure in my opinion. You can use the email address in your account to receive an email to change your password. Simply letting you change your password on the website can be risky as the hacker only needs to know your email address but in this method you must login into your personal email account and click the link in the email that’ll take you to a secure website in order to change your 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 validate user credentials when logging in.
* The system shall give the user the ability to choose a date and time for their appointment.
* The system shall give the user the ability to access its practice exams.
* The system shall give the user access to their personal information.
* The system shall allow the user to exit their profile at any time.
* The system shall allow the user to update their personal information at any time.

### 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 must have a clean layout with all the links available on the main page. The different users for the interface are the users, IT admins, and the DriverPass employees. The user can only access their own personal profile along with the features that are appropriate with their package. The IT administrator’s interface will be more technical with more privileges to best help the customers. The DriverPass employee will have the ability to make appointments on behalf of the customer. Not all customers will have an online account so the employee must input the customer’s personal information and payment method to make the appointment.

### 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?*

* Something that wasn’t really specified in the design above is the technological requirements of the user to access the system. The assumption is that the user has access to the internet and is using a device that is compatible with a browser. The client stated that they would like to access the system from anywhere so since the environment will be a web-based application it’s important for the user to have access to a web browser.

### 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?*

* Limitations include stuff such as the scope and any dependencies outside of a system like the internet. The servers and client must both be connected via an internet connection to exchange information. Currently the system works only locally in our city. Because of the restraint of time, the area for which we can accommodate is small and will later implement the system in other cities.

### 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 computer

Description automatically generated