# 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 for this project is DriverPass, and they want their system to give students the ability to schedule appointments for lessons, take classes and practice tests. They would also like their system to create a profile for the student with all important information that is necessary. The system needs to be cloud based to it can be accessed from anywhere and all changes can be made remotely.

### 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?*

* The system must also allow the student or secretary of the client to book appointments, modify existing appointments, schedule reservations for lessons, and take courses and practice tests. The system also needs to have the backend open for administrative users to access profiles, delete profiles, change passwords, and perform maintenance on the system.
* There also needs to be a specific page the driver can place information about lessons such as lesson time, start time, end time and driver comments. A contact page for the student to contact DriverPass, and for DriverPass to contact the student is also needed. Phone appointments will also be considered so that they can be entered into the system. Three different packages will be available for purchase and will also need to have the ability to be disabled by administrative users if necessary.
* DriverPass would like their system to be completely online based so that students and drivers can interact with one another from anywhere. The system needs to be cloud based so security can be handled, and all administrative users can focus on upkeep and maintenance. Activity reports need to be accessible and printable for administrative users. The system also needs to be connected to the DMV so it can be updated with any new standards that the DMV implements.

### 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?*

* Once the system is complete, it should allow the students to book appointments, schedule on-road lessons, view the driver they are being paired with, and contact DriverPass if necessary. A main page needs to be created with sub pages that stem from any links/prompts clicked within the system. The system needs to be monitored by internal administrative users in case anything needs to be changed or added to the system. All data will be stored within the cloud so it can be accessed from anywhere on any computer. The overall premise is to give students the ability to purchase different packages and take advantage of the perks that are included in those packages, all while maintaining a seamless and user-friendly experience.

## 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?*

* This system will run in a web-based environment, which means that it will be operating with cloud functionality. Depending on the user’s internet connection and data speeds, the system will run based off those variables, but overall, the system does need to be fast enough to maintain scheduling and communication needs. The system should automatically update in the background and have no effect on the user.

#### 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 have the ability to run on all platforms since it is a web-based system. All operating systems will have access to the website via a browser. Seeing as how the system is completely cloud-based, no tools will be needed but there is the possibility for certain API’s that may need to be implemented for operating system functionality.

#### 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?*

* Users will be identified by a specific username that is chosen by the user at sign up. Case sensitivity will not be an issue since the username will be stored within the system once it is created. If another user tries to create a username that is already in use, they will be notified that they must chose another username. The system will inform an admin of problems if there is a user that is created with a duplicate username that somehow got through the user creation process.

#### 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?*

* Seeing as how the system will be built to house multiple users, it should be implemented in the structural code from the start to have the ability to add/remove/modify different users. Once it is built into the code, along with being built into the GUI, the IT admin will have this separate functionality with their special permissions to the system that have been granted.

#### 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 a user to log in, their IP will need to be cross referenced with the IP that was used at the time of creation, to verify that it is the same person that is logging in. Multifactor authentication will be used as well so that the user has multiple options for verifying that they are the one trying to log in. If there is a brute force attempt, this will be detected by the IP check, the account will be locked out and the user will be notified. From here, the user must verify that there was an unwarranted attempt to login to their account and reach out to the IT admin to have their account unlocked. If a user forgets their password, they will have the option to change it by clicking a link that redirects them to a change password functionality, which is sent to their email that they registered with at time of account creation.

### 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 prompt for user creation.
* The system shall prompt for user login credentials.
* The system shall verify the correct information for login credentials.
* The system shall schedule appointments book reservations.
* The system shall offer the different packages available for purchase.
* The system shall show the driving trainer and their information.
* The system shall all classes and courses that have been completed.
* The system shall allow the user to make changes and update information.

### 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 be user-friendly and operate without any hesitation. The different users for this system will be the secretary, driving trainers, admins, and the users. Each user will need to be able to access certain areas of the website based on their permissions, for example, IT admins will need to be able to access the full website and the backend for modifications that need to be made and for updates. The interface will be optimized depending on what device the user is accessing the interface from. On mobile devices, the interface will be designed to fit the ratio of mobile screens. As for on a normal browser, the interface will function as normal since the browser adapts to the screen size of the computer that is accessing it.

### 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?*

* A few things that were not considered were the devices that the users are operating on how wildly different the user base will be in terms of the devices that are being used. There is the assumption that all users will be using the same device to access the system, but that is never the case.

### 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 that I see being a possibility, are time and resources. Building a system of this magnitude, and for such a wide user base, will come with the complications of budget and time restraint. Having the financial backing to be able to have the system accessible on multiple platforms will not only take time, but a substantial amount of money to be able to get it functioning the same on each platform. Another thing that stems from the financial concern is the labor cost that it will take to build such a system.

### 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.*

