# 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 the project for DrivePass is to build a system that will provide a better driver training experience to customers which will help them pass their driving tests with the DMV. The system should include online classes, a series of practice tests, and on the road training that is pulled from the DMV to maintain accuracy, the system should also allow for customers of the client to make reservations for driving lessons. The system should also allow employees access to basic data following a least privilege methodology to preform necessary duties. Administrators should be able to manage user accounts, basic security needs, and full data backups to prevent data loss or corruption.

### 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?*

* DrivePass has identified a large market gap for better driver training experience to improve and help customers pass their driving tests with the DMV.
* The company will offer both online and in-person classes, practice tests and on-the-road training to meet this need.
* The system will be used by the customers providing them with status information, matched driver information, and other basic information.
* The system will also be used by both employees and administrators to manage, maintain, and improve the training process.

### 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?*

* Allow a customer to access online or offline classes, practice tests, and status of on-the-road training. As well as allowing them to access and make reservations for classes and on-the-road training and giving all necessary information about the driver they are matched with.
* The system must be accessible for the client from anywhere both online and offline to allow DrivePass to download reports and information that can be used with tools like excel to work on any needed changes or modifications. The system should only except any changes when online to reduce risk of duplicate data.
* The system needs to have security features that align with least privilege so that employees only have access to what they need access to. Their should also be a tracking feature to note all changes and identify who made a change especially when a reservation is made, canceled or modified.
* A customer should be able to make a reservation for a driving lesson specifying the date, time, driver, and potentially car. The system must track the users information and which driver and car they are matched with and provide the customer that information online.

## 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 in a web-based format as this will give users a wide range of choices for accessing it.
* The system should have a fast response time as this will directly correlate with user experience and quality when engaging with the system.
* The system should be updated any time the client wants to change or add new features or when adding or making the system more secure.
* The system must be able to support many concurrent users without a major drop in performance and performance degradation should be kept to a minimum.
* Response times for a critical function should be kept to a minimum to allow for the system to run smoothly.

#### 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?*

* If DrivePass has a current technology infrastructure that is what the system should be compatible with however if no current infrastructure is present the system should be compatible with Linux and Windows based server systems.
* If a cloud based system is chosen both the database and security for the database can be managed by the cloud.
* For users the system should be able to run on any platform due to the cloud and web-based design for maximum usability.

#### 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?*

* The system will distinguish between different users via user created usernames or for administrative staff via office created usernames with all input being case sensitive.
* The system should have an alert system to immediately inform an admin if there are any problems, glitches in the system, or if users are having issues accessing anything they should have access to.
* Their should also be a button for users to report an issue if they find something to flag it for an admin so that it can immediately be addressed.

#### 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?*

* The system should be highly adaptable to allow for changes to be made to users without changing the code.
* The system should be adaptable to allow for platform updates to be made at regular intervals so that new features, functions, or changes can be made easily and in a timely manner.
* The IT administrator will need to have full system access so that they might address any issues that arise or to make any necessary changes and to ensure that things like platform updates are rolled out seamlessly.

#### 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?*

* Users will be required to have a username and password to log in.
* The cloud will facilitate the data exchange between the client and the server to maintain a secure connection.
* The system will automatically disable a user account and lock it if 5 incorrect attempts are made to log into an account to prevent a brute force attack. It will also send a notification out to the user appraising them of the situation and providing contact info to reset their username and password.
* The system should also have multi-factor authentication to increase the security of user accounts.
* Passwords will be case sensitive and require a minimum of 8 characters one capital letter 2 digits and one special character.
* If a user forgets their password their will be an option to select forgot password it will ask them some basic information to confirm its them and then ask for the email they created their account with to send a password reset link to that email address on file for the account.

### 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 book reservations when made by users and confirm there is not a scheduling conflict.
* The system shall provide practice tests and online classes.
* The system shall show which driver a user has been paired with.
* The system shall provide at least three different driving packages (more can be added later)
* The system shall run fast and efficiently.
* The system shall provide access based on the user account type and the privileges associated with that account type.
* The system shall show tests their scores and the work that a user has already completed.

### 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 provide a customer with many options including making reservations for driving, taking online classes, and taking practice tests.
* The interface needs to provide driver pass employees with the ability to access user account information and make changes and to make updates to the system as needed.
* A user should be able to interact with the interface from different devices including a mobile phone, laptop computer, desktop computer or any other device capable of an internet connection and a stable browser 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?*

* A budget was not addressed for the system so we are making an assumption that everything being asked for will fall within the budget.
* We are assuming that DrivePass will have easy access to their technology and either has or is easily able to get adequate staff to maintain the system and provide a strong user experience.

### 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?*

* One limitation is the time constraints that we have to build the system with five months to accomplish the goals.
* We may also have an initial limitation if the number of users exceeds the predicted baseline.
* Their also exists a limitation in that the amount of staff DrivePass has may not be enough to match the needs of their clients.
* We also have the limitation of being unaware of what the budge is for the system currently.

### 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 colored squares

Description automatically generated with medium confidence