# 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, DriverPass, wants to provide their customers better driving training and take advantage of the market’s void in this area.
* DriverPass would like their system to have the ability to handle purchases (packages), provide online classes, practice tests, virtual training, in person and on-the-road training, and reservations.
* DriverPass would also like their system to be able to be administratively managed by their employees.

### 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’ system aims to reduce the number of inexperienced drivers by offering in-person and online services. Liam (DriverPass’ owner) has stated that many people are failing the DMV’s driving tests.
* DriverPass wants customers to access their data at any time, offline and online, and from different devices, such as their computers and phones. Employees should also have the ability to help customers through the system. Customers, for example, should be able to see their reservations at any given time, as well as which driver they’ve been assigned to.

### 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?*

* DriverPass’ system should be able to:
  + Create a customer’s account, and store their account information (name, address, phone number, payment preferences).
  + Allow for customers to update their account information.
  + Handle reservations: customers and employees should be able to reserve, cancel or edit reservation, view time of reservation, etc.
  + Match customer with driver based on customer’s needs.
  + Allow driver to provide and leave feedback to customer.
  + Handle online reservations, training, and tests.
  + Handle purchases of different types of packages.
  + Allow access to data offline and online, and allow changes (example: change reservation date or time, change or reset password, view grades and progress).
  + Allow administrative access to employees based on their roles.
  + Provide notifications to customer in regard to changes made within DMV rules.
  + Contain security features, such as administrative functions and more than one layer of security.

## 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?*

* DriverPass’ system needs to run in a cloud-based environment and must rust as fast as possible, so the customer will have to wait as little as possible. ½ second to 1 second should be the goal (keeping in mind that people will have different internet speeds).
* DriverPass’ system should be updated every month.

#### 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?*

* DriverPass’ system should run on computers, mobile devices, and tablets. It should also be compatible with different operating platforms such as Android, iOS, Linux, MacOS, and Windows.
* The back-end part of the system must have a database and a server to store any necessary information (customer’s information, for example), receive and manage requests, and respond.

#### 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 customer will have a unique username, and must use their email in order to create an account. The same email cannot be used on different accounts.
* The password the customer uses to create their account must be case-sensitive.
* If a customer forgot their password, they could choose to reset their password. A link to reset it will be sent to the email connected to the account. On the other hand, if a customer attempts to login multiple times, their account will be placed on hold or locked out (at this point, the administrators will be notified).
* If connection to the database and/or server has been lost, the administrators will be notified.

#### 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?*

* Customers and employees should be able to add/remove/modify account information, such as address and payment preferences. Customers can do it from their computers, mobile devices, and tablets. Employees must do it through their computers, or computers provided to them by DriverPass.
* Because the system will be maintained and tested before deployments, updates should not impact it.
* IT administrators need access to customer information. They will also be able to create customer and employee accounts, set roles, and disable or enable employees.

#### 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?*

* Customers will need their username or email, and password, in order to log in and access their account.
* There are two ways in which the connection or the data exchange between the client and the server can be secured: encrypt the data or encrypt the connection. Both can be encrypted at the same time, but it is rare.
* In case of a “brute force” hacking attempt, administrators should be notified and place the customer’s account under hold or lock. Customers should also be notified via email. Double-layered security can help reduce such hacking attempts.
* If the customer forgot their password, they could request a password reset, and receive an email that will allow them to create a new 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 display the interface when a customer visits it. Their services, account login and account sign up should all be accessible and visible.
* The system shall display customer’s account once they have successfully logged in. Customers should be able to see and maintain their personal information, see their current progress, schedule, and reservations, and much more.
* The system shall display a direct link to the DMV and their latest updates.
* The system shall be able to register new customers, and validate their email. The system should also be able to verify if the password the user created is case-sensitive. If not, it must prompt the user for a case-sensitive password. The system should also validate the credentials of current customers.
* The system shall allow purchases, scheduling, and reservations made by the customers, employees, or administrators.
* The system shall allow online tests and training to take place.
* The system shall produce reports.
* The system shall allow administrators to view all activities and reports.

### 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 should be accessible, user-friendly, and easy to navigate and understand. If the user is accessing the website through their mobile device or tablet, the interface should adjust accordingly.
* The different users for this interface are customers, employees, and managers (administrators and/or owners).
* Customers need to be able to create an account, store their account information (name, address, phone number, payment preferences), view purchased packages, schedule lessons, schedule training, and take tests.
* Employees need to be able to help customers in many ways, from account creation to scheduling lessons. All that a customer can do, and employee should be able to do and help with.
* Administrators need to be able to create an employee’s profile and set the restrictions based on the employee’s role. They also need to be able to be notified of if the interface faces any problem.
* Administrators need to be able view all activities and reports of their interface.

### 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?*

* Customers have a computer, mobile device, or tablet.
* Customer has a stable internet connection.
* Employees will be available 24/7 to help customers.

### 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?*

* It is possible that not all search engines, such as Firefox, Google Chrome, and Safari will be compatible with DriverPass.
* If the customer needs help with something specific (regarding their account and/or payments, for example), it is possible that they will have to contact an employee or submit a request to fix the issue.

### 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.*

