# 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 in question is Liam, the owner of DriverPass.
* The purpose of this project is to provide a better type of training when it comes to practicing for a DMV driving test. This project will provide not only online classes and practice tests, but also on-the-road training if needed.
* The system needs to allow Liam to access his data from anywhere, including both online and offline.

### 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?*

* **User Management**
  + He needs to be able to download reports and information that he can work on at home with Excel.
  + Tracks user information, ie. personal and payment details along with their lesson plans.
* **Reservation Making and Scheduling**
  + Their customers must be able to make reservations online or on the phone.
  + Allows users to make, cancel and modify appointments online if needed.
* **Lesson Tracking**
  + The system must be able to identify the driver the customer is scheduled to go out with, the time, and the car used.
* **User Interface**
  + The UI must match the owner’s vision, as specified on the drawing that was given.
* **Future Features**
  + Leave room for future features to be added if any.

### 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?*

* **It should be able to…**
  + **Manage Users,** ie. handle registration, login, activity tracking.
  + **Schedule Lessons** online and over the phone.
  + Provide the outlined **online training.**
  + **Generate report**s for the business owner to look at.
  + **Secure the user’s data.**
  + **Ensure flexibility,** ie. allowing the owner to check and uncheck availability for packages.

## 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 must be able to…
  + Run in a web based manner and will have to support multiple different devices such as desktops, smartphones and tablets. It has to be able to be accessible online with an active internet connection.
* The system should be fast enough to load data within a few seconds.
* The system should be regularly updated and maintained to ensure functionality and maximize user experience. It must also be regularly updated to match DMV guidelines.

#### 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 platforms that the system should run on should consist of…
  + Windows, MacOS, Linux, smartphones, etc.
* The backend should definitely consist of a database such as MySQL to handle user data, reservations, etc. and a cloud service should be bought to handle system security, backup and code redundancy.

#### 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 distinguished from each other by…
  + Being given unique identifiers, ie. email and or usernames.
  + The input will be case sensitive for usernames, passwords, etc.
  + The system should inform the administrator of a problem when there may be potential security or payment issues, if there are any bugs/errors on the website, and if there are any conflicts when it comes to booking/modifying driving lessons. They should also be notified if there are any pending updates needed to be done on the website, or if there is new information from the DMV.

#### 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?*

* Yes, changes can be made without changing code, ie. …
  + Admins can easily edit user information in an admin interface/panel.
  + Resetting passwords or updating user information can easily be done through there as well.
* The system will be cloud-based, so it’ll stay compatible with updates to operating systems and browsers automatically. Regular updates and patches will keep everything running smoothly and securely.
* The IT admin will need full access to…
  + Manage user accounts, reset passwords, and control system security settings.
  + They should also be able to monitor system activity and troubleshoot issues as needed.

#### 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?*

* In order for the user to log in…
  + They need to use a valid username and password.
* The connection can be secured using HTTPS with SSL encryption.
* If there is a “brute force” hacking attempt, the system will temporarily lock the account after a set number of times and notify the admin.
* If a user forgets their password, they can reset it through hitting a “Forgot my Password” button and reset it through an email verification process

### 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 properly validate the user’s username/email and password when logging in
* The system shall allow the customer to create, modify and cancel driving lesson reservations online
* The system shall allow administrators access to be able to manager user accounts and reset passwords
* The system shall abide to DMV updates to ensure compliance with the current driving regulations
* The system shall have proper security and securely encrypt data exchanges between the client and server

### 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 needs of the interface are…
  + The interface MUST be user friendly and accessible for both mobile and browser users.
* The different users for this interface include…
  + The Administrator
  + Customers
  + Staff to handle scheduling and customer service
* Each user will need to…
  + Admins: They need to be able to manage user accounts and control the system’s settings.
  + Customers: They should be able to schedule, modify and cancel their driving lessons.
  + Staff: They will handle scheduling/confirming customer appointments and assigning drivers to reservations.
* All of the users will interact with the interface through both mobile devices and browsers.

### 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?*

* Some things that were not addressed in my design above could include…
  + The technological literacy of the customers, ie. assuming the customers are able to feasibly navigate the website on either a computer or cellular device
  + Payment processing was not mentioned, so it would have to be implemented
  + There was also the assumption that the users have access to a strong, reliable internet provider

### 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?*

* Some limitations that I could see would be…
  + The scalability of the project. If it ends up becoming larger than what it currently is, the current system might have issues supporting a large customer base over different regions in the United States
  + The budget will most likely grow if the project becomes more popular, and it may end up being too costly
  + If anything, there might be time constraints as well as resource constraints too.

### 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.*

