# 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 give a convenient online service to users who are in the process of getting their license. The client is DriverPass and they want their system to be able to assist users with studying for driving lessons, schedule in-car lessons, and take practice written tests online.

### 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 wants the system to provide training for all customers not only online but also on-the-road training.
* The problem that they want to fix is the high failure rates at the customer’s local DMVs.
* The components that are needed for this system are online classes and practice tests, a scheduling system, user roles and permissions, data security, a cloud-based system, they want their service to follow the DMV and future scalability. Overall, DriverPass wants a user-friendly system that addresses the specific challenges in driver training and test preparation while prioritizing data security, compliance, and ease of use.

### 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?*

* When completed, the DriverPass system should be able to accomplish several objectives and goals that include assisting the users with easy scheduling for lessons and accessibility for lessons on the website that DriverPass is requesting.
* The measurable tasks that need to be included in the system design are developing interactive online modules with videos, quizzes, and simulations that the users can access and complete, implementing an online booking system where the users can select the package that they would like to enroll in and allow them to choose specific dates and times for their driving lessons. Implement role-based access control (RBAC) to define permissions for admin (Liam), IT officer (Ian), the secretary, and the customers. Include functionalities for password reset and account management and implementation of activity logging to track the completion of tasks, lessons, and quizzes. The user interface (UI) should also be user-friendly and that follow the client’s wants and needs.

## 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?*

* We need a web-based cloud environment.
* An average load time of 1-2 seconds.
* The system should provide some feedback for load times over 3 seconds.
* The systems should be updated every month, once a month, or as any updates are needed.

#### 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 run on any OS on computers and on any mobile devices.
  + Google Chrome
  + Safari
  + Mozilla Firefox
  + Opera GX
  + Microsoft Edge
  + Internet Explorer
* The back end will require a database to store any information from the user and the system’s information.
* The back end will also require a web server to manage requests and responses as well as process them.

#### 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 be able to identify whether it is an employee or a customer through separate login sections.
* Passwords for users and employees will be case-sensitive.
* The system will inform any admin if there are any problems with the system daily.

#### 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?*

* Any changes to the user will be made on the backend and will not have to change any code.
* The system should be able to adapt to any platform updates without any issues.
* The IT admin will need access to the database and the web server to perform any maintenance or modifications necessary for the system.

#### 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?*

* A password will be required for the user to log in.
* 2FA (two-factor authentication) will be available for an extra layer of protection to secure the data exchange or the connection.
* The user would be locked out after 5 incorrect password attempts.
* There will be a “Forgot Password?” button to give notification to the admin that the user has forgotten their password and it will allow the user to change their 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 be able to tell between the type of user. Either admin or customer.
* The system shall allow the admins to disable any packages that are already full.
* The system shall allow each customer to select which package they would like to purchase.
* The system shall allow the customers to reset their password if they forgot it.
* The system shall allow only 5 incorrect login attempts before locking customers out and notifying the admin.
* The system shall create a user’s account and store the user’s information.
* The system shall allow access to the website at any time, anywhere online.
* The system shall be able to display all packages that are available for purchase.
* The system shall track which customer is paired with which driving instructor, what time, and what type of car will be used.
* The system shall be connected to the DMV to stay up to date with any information on driving laws.
* The system shall display all customer progress throughout the packages and show the customer’s information or status.
* The system shall display the driving instructor’s notes.
* The system shall display the time that the lesson will start and end.
* The system shall display a picture of the student and the instructor.
* The system shall allow any customer to access online learning tools as needed.

### 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 customers will interact with the interface online through any computer or mobile devices.
* The different types of users for this interface will include admins/employees and customers.
* The customers should be able to view and access the following:
  + The log-in and registration page.
  + The website’s home page
  + The student’s current test scores and lesson progress.
  + All test scores
  + Their information with the ability to update if needed.
  + Notes from the driver, lesson start and end times, and lesson dates.
  + Each package’s information
  + All necessary online learning tools.
  + The company’s contact information page.
* The admin should be able to view and access the following:
  + All the information of each customer that is registered.
  + Every package that has been purchased and by which customer.
  + Admin should be able to have access to remove packages that are full.
  + Which customer is matched up with which driving instructor as well as the lesson start and end times.
  + Admin should be able to allow the customers to reset their password if necessary.

### 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?*

* Each user has online access every hour of every day.
* Each customer will understand easily how to navigate the website.
* The admins have the necessary skills to be able to navigate and access all the website’s functions.
* Each customer will show up on time to their lessons from the respective package purchased.
* Each driver will show up to each driving lesson

### 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?*

* DriverPass only has 10 cars and each car needs the necessary maintenance to be ready for use at all times.
* Any issues with internet connections can happen and this could cause a delay to any information that needs to be updated.
* There are only so many packages that can be purchased by so many customers because of the limited number of cars.
* Customers may not have up to date technology.
* The requirements need to be met within DriverPass’ time frame and budget.
* Some customers may only have experience driving certain types of cars.

### 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