# 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 help customers with driving, specifically DMV online courses and practice tests and even on-the-road driving training if requested. The client is DriverPass and the owner’s name is Liam. The client want their system to help individuals pass their driving tests.

### 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?*

* Liam wants to be able to access data both online and offline.
* Able to track data changes like password resets made by users
* Users to be able to create reservations (with time and date, as well as the trainer assigned to the customer)
* Three different types of packages available for purchase.
* Run in the cloud.
* Track test progression.

### 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 this system is completed, it should be able to meet all of the above requirements. The measurable tasks to be included to achieve this are:
  + Create downloadable data storage (for offline and online use)
  + Create system to track who made a reservation, who canceled it, and who modified it last.
  + Create reservation storage with a database, it needs to hold the user information, day, time, the driver/trainer, and the car.
  + Transaction system for training packages -
    - Package One: Six hours in a car with a trainer
    - Package Two: Eight hours in a car with a trainer and an in-person lesson where we explain the DMV rules and policies
    - Package Three: Twelve hours in a car with a trainer, an in-person lesson where we explain the DMV rules and policies—plus access to our online class with all the content and material. The online class also includes practice tests.
  + Setup cloud system in AWS for system to operate
  + Develop a system to track current progress on tests and courses

## 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 DriverPass system needs to run in an application that is accessible from both mobile and pc. The system needs to be efficient and should be constantly updated with data change. As for security or application updates these should be as needed with conerns or new feature implementations. Ian specifically metions he wants the system to run from the cloud.

#### 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 the web, iOS, and Android. The web will allow for both Windows and Unix systems to access the application, and iOS and Android are both important for mobile usage. The backend will most definitely require a database to store user information as well as each account’s current state because DriverPass needs to be accessible from seperate devices with the same information stored.

#### 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?*

* To diffentiate between different users we will store usernames and passwords, the usernames don’t need to be case sensitive but the passwords do. The system should inform the admin of any problem immediately. Any password change or change requests need to be sent to the admin and any incorrect logins should be logged for the admin to review.

#### 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 there should be functionality to change these user variables without changing code, but only the admin can reset passwords or change any user information. The admin would need to change the data in the database or implement a function to change it for him.

#### 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 login they need a username and password, and further information when signing up. To secure the connection or the data exchange between the client and server https with encryption like TLS should be employed. If there were to be a brute force attempt, the admin should be notified immediately and the account should be locked. If the user forgets their password the admin should be notified and reset their password for them.

### 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 allow users to create new accounts with their personal information.
* The system shall allow users to edit their account information.
* The system shall track and store users progress in courses.
* The system shall allow users to pay from the app for courses/training.
* The system shall send automated emails for order confirmation and appointment reminders.

### 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 different users of the interface are going to be customers and admins. Customers should have a smooth user interface with functionality that aligns with their role, while admins should have a user interface that allows them to perform additional tasks to manage users and the system. Each normal user will need to be able to create an account, login, schedule appointments, update their profile, select their package, and also be able to pay from the app. The admins should be able to do all of this as well for troubleshooting and review purposes, and should be able to manage users and the systems as well.

### 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?*

* The assumptions I am making are as follows:
  + Users have internet connection
  + Users can navigate the application
  + Users will provide correct information about themselves
  + Users have baseline technical knowledge.

### 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?*

* There are many constraints with this project, especially in the time and budget areas. The timeframe is already planned out as we gathered from the conversation between the team, and each part has its own scheduled development period. Now, we do not explicitly have a budget but I can assume that the budget is not going to be very large as Liam, the owner of the app, seems to have been a normal guy with an idea he believes in. This is an assumption as budget hasn’t been talked about, but budget will be a limitation. As for resources, I think all of the resources needed to make this project come to life will be easily available as most applications are hosted fully digitally and Liam has all of the physical products he needs.

### 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.*

