# 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?*

* DriverPass, the client, wants to overhaul the experience for students training to drive. Liam, the owner of DriverPass, feels that there is a need for better driving training. Through his company, Liam aims to help drivers with their DMV tests by providing online training and practice through their application. On top of online training, his company will also be able to provide in-person driving lessons if the user wishes to. The system will also allow its students and trainers to access their account information and data through the application with the ability to download reports and other information that they can work on at home. On top of this, Liam wants us to develop a reservation system that will reserve the allotted time for driving lessons. Users should be able to register their account and set reservation times, as well as canceling and modifying their existing appointment. Every appointment must also be accompanied by a set instructor, which will be determined based on when the appointment is and which instructor is available at that time. Liam came to us to build a sophisticated system that will handle all of this. Most importantly, Liam wants us to develop different packages users will be able to choose when setting up their classes and reservations. Packages will include, *Package One*: Six hours in a car with a trainer, *Package Two:* Eight hours in a car with a trainer in-person where the student will be instructed on how to drive as well as preparing for the entire DMV testing process. And finally, *Package Three:* 12 hours in a car with a trainer, all the benefits and access to the online application where their is access to online classes, content, and material to use to study online at home.

### 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 its system to handle multiple tasks, such as the ones listed above. On top of that, DriverPass is asking to enable the system to handle different employees at the company and handle different roles with different permissions. The owner wants full access to the system for his employees in case they forget their password or the ability to remove someone from their system if they let someone go. DriverPass is also asking to be alerted for any tracking to their system. Admins should know when someone makes a reservation, cancels one, or modifies a reservation. The system should also be able to print out activity reports of its users and employees. Some of the employees and roles to look after are Liam (the boss), IT officer, and instructors. They will all have separate roles and permissions within the system, with Ian the IT officer being capable of maintaining the system.

### 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?*

* Store and track data for all the clients in the system
* Provide interface for users to interact with system, such as online classes and materials.
* Account profile with relevant information regarding that specific user.
* Appointment scheduling
* Appointment modification
* User/admin permissions to modify or maintain the system (ex: admins having access to disable packages)
* Online database to numerous content sources, from videos to readings.
* Provide the users with packages to choose from for their learning experience.
* Alert users on new DMV rules and policies for their county/state.
* Driver notes feature for instructors and admins to write notes on the client for future reference.

## 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 web-based and application based, with the ability to use the system across multiple web browsers, operating systems and mobile devices. The best method for data storage should be cloud storage as it saves money for their company and provides the company with a fast and efficient way to store data and manage their system online. The system should be maintained by an IT officer every so often but should be updated based on need and any other potential new features that need to be implemented.

#### 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 work across all operating systems and primarily be web-based with the ability to access the system across most web browsers, such as Chrome, Firefox, Edge, etc. The backend does not require any tools for the company to use since the system will be run on the cloud and they don’t want to have to deal with backend and security management.

#### 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 distinguish between users, there are different roles and permissions different users with have. Admins will also be able to identify different users based on the package they have chosen as well as the class and/or plan they are working with. In regards to account activation, the input will be case-sensitive as we want every user to be uniquely them and not have confusion across the board when a problem arrises. Security and two-step authentication should also be implemented to ensure a secure system across the board. Admins should be informed of any system issues, bugs, glitches, or more.

#### 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?*

* Admins, such IT admin/officier should have the most permissions and system access. This role should be able to modify any data they need, not including backend, to ensure the system is working properly and there are no errors. Admins should also be able to add, remove or modify existing roles or users, such as removing anyone who should be removed from the system. Users and admins should also be able to edit their profiles. Admins should have access to editing other user profiles, such as modifying driver notes and more. The system is run on the cloud so any updates to the system from admins or developers should not hinder the system at all.

#### 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?*

* To begin, a user’s profile will be activated based upon the completion of normal processes, such as registration, email confirmation, and two-step authentication. There should also be parameters for how the password should be, such as including a capital letter, a special character, numbers and minimum length. These steps will assure the user that the system is safe and their data is protected. Because of the cloud, the data exchange between client and server should be seamless. In case of brute force hacking attempts, these requirements set for password creation slows down any brute force process and provides an added layer of security for the user. With a tough combination of letters, characters, numbers for the password as well as two-step authentication, we believe the system will be able to handle such malicious attempts. Other security measures to be taken could include email confirmation being sent in case an unknown IP from a different location is trying to access the account. If this occurs, the user could simply block or lock their account from being accessed by any other IP that isn’t theirs. If a user forgets their password, the system may be able to send a short digit code to the account’s confirmed phone number that the user could enter to reset 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 run on the cloud
* The system shall run efficiently without delay
* The system shall provide activity reports, testing reports, and more.
* The system shall field reservation requests from it’s users.
* The system shall provide permissions and privileges for specified users, set by the main admin.
* The system shall provide the users with an interactive online system that gives users the ability to access driving tests and other learning materials.

### 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.)?*

* User interface will be dependent upon whether you’re an admin, instructor, student, or regular user. For admins, their user interface will be totally different from a student. An admin may be able to access more data and other functionality, such as being able to modify existing data and modify profiles/accounts. An instructor may have all access to student reports and their classes, but don’t have access to modify data that admins are allowed to. Students and users will only have access to learning materials, classes, and videos. Students and users may only modify the data that is publicly displayed on their profiles, such as profile photo, trophies/achievements, etc.

### 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?*

* We are assuming every one of our users will have access to a web browser, whether through a personal computer or mobile device.

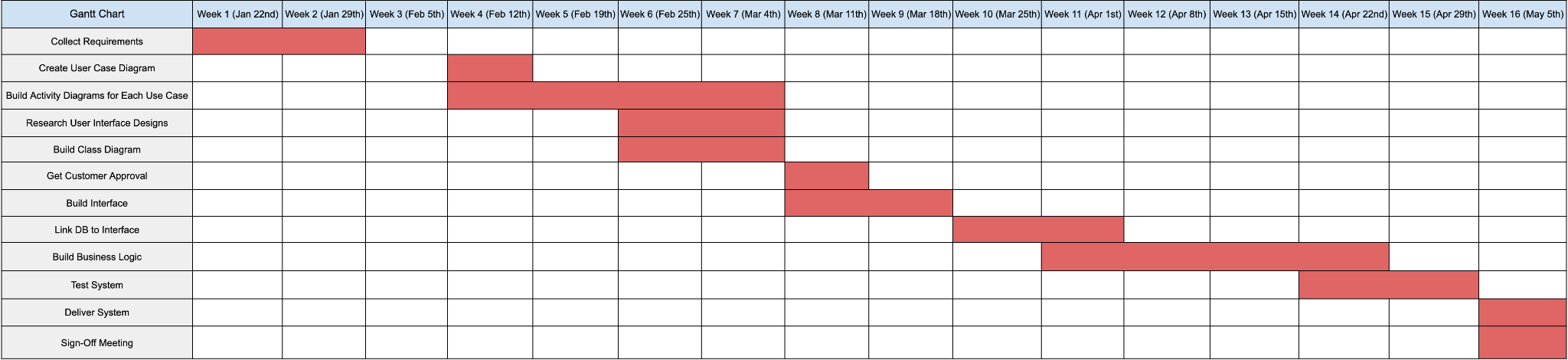
### Limitations

*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?*

* The biggest limitation I have found is the short amount of time we have to develop the entire system. With only about 5-6 months to complete and deploy the project, we are going to have to develop in a timely manner but also ensuring the system and it’s functionality is all working as intended. Another limitation is the budget we have to develop the system and it’s cloud architecture.

### 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.*

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