# CS 255 Business Requirements Document

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 provide students that are studying to take a driving test at the DMV a robust set of tools that would help them practice and study for their examinations. The client, DriverPass, wants their system to be able to take user information in the form of a user account, contain the studying tools and interface for the students, as well as track all data produced.

### 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 requires that the system help these students prepare for their drivers examinations by providing a full solution to both online studying and in-person training. For this, the system must interface with a user via an account, and track all data that the user produces. This includes keeping record of completed practice examinations, showing a progress bar towards completion, and containing the data that makes up a user account. The application will need to allow for interactive learning tools, often in the form of embedded applications. A server allocation is likely necessary to host the applications and user data.

### 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?*

* Once complete, the system will provide a set of objectives to the student, and show progress towards completion of these objectives, based on the course of study. The user should be prompted to create an account upon first visiting the webpage, and include their email address, physical address, and payment method. The client will provide trainer notes that will help guide the students and provide analytical feedback on the student’s progress. The system should have the ability to grade all practice examinations, and store this information for later access. Finally, the security staff should have the ability to access and assist with account recovery issues that the user might encounter.

## 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?*

* This system should run entirely web based, to allow for access to data from remote administrative sources, and provide client/server access to the customer base. The system should be created with performance in mind, with specific embedded learning tools to be developed and provided by the customer. The system should be easily updated upon further guidance from the DMV.

#### 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 application should be able to run on both Windows and Apple platforms. The back end cloud databases will need to be expandable to support the size of the customer base, and provide for the security of encrypted user data.

#### 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 user account must have a unique identifier that is system generated upon completion of the account creation workflow. The input of the username is case sensitive. The system should automatically notify administration staff of troubles with accounts and especially in the case of a locked account.

#### 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?*

* IT admin at DriverPass will need the ability to make updates to the system and its data, with the ability to bring the system offline and online. Administrators should have the ability to delete extraneous data, and modify user accounts. All changes to user data should be made without the need to change the code.

#### 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?*

* Each user must provide a unique username and password to gain access to the associated user account. This should be expandable to allow IT admin to dictate the requirements for this username and password. The system should utilize a cloud server to ensure that the data exchange is between only the authenticated user and its own data. Password attempts should be limited by default, and afford IT admin the ability to customize these settings. The system should notify System Admins of any instance of a locked account by repeated attempt. The appropriate staff should have the ability to provide password reset in these cases.

### 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.”*

1. The system shall be accessible through laptop and desktop computers.
2. The system shall include up-to-date DMV driving policies and regulations.
3. The system shall incorporate unique user names to ensure that no one is confused for another.
4. The system shall involve validating user credentials when logging in.
5. The system shall contain schedules to help students decide which available times work best for them.
6. The system shall contain practice tests and information for the student to study and practice for their driving test.
7. The system shall cover individual progress reports for each of the students to highlight their strengths and weaknesses.
8. The system shall contain trainer notes and feedback to ensure that the student gets the best learning experience.
9. The system shall number updates as it grows with new users.
10. The system shall add new/delete/update customer accounts on as needed basis.
11. The system shall comprise of security protocols to ensure that accounts are not solicited.
12. The system shall encompass easy to understand layout for users.
13. The system shall cover available trainers for customers ready for driving sessions.
14. The system shall involve user pictures for customer distinction.
15. The system shall be able to work online and offline for product owner or administrative staff.

### 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 users are the direct customers of DirectPass, and the interface should be achieved by the use of a data structure containing the input and required personal data from each user, including email address, physical address, and payment information. The user should be able to update any change in contact information, and view various pieces of account info on one centralized interface. Administrators should have the ability to assist a user in updating an account, as well as make changes to system level data such as tests and applications, to support continual requirements from DMV. The user should be able to access the system from the most common web browsers available to the respective platforms, including the mobile platform.

### 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 made are that the prospective customers and users have the ability to access the platform technologies listed, and the desire to spend time interacting with the system in order to practice the skills. The user must also have the financial means to procure this training.

### 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?*

* This application is limited in that it will be built specifically for a desktop environment, where its users will have access to a full keyboard and mouse interface. The embedded applications will not typically be natively supported in mobile browsers, with a touch screen keyboard. The user interface may be developed on the mobile platform natively in the future, so the ability to access basic user info via mobile browsing is important for brand awareness.

### 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.*

