# 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, Liam, wants to create an improved system that aims to help students with their driving tests. Specifically, Liam wants to implement practice tests, both online tests, and then real life on the road tests, for the students. Liam also wants his staff for his company, DriverPass, to assist in the real-life training for the students.

### 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 be available both online and offline. From the interview, there is concern about a user’s settings being saved if they change it, for example, checking the progress of one of their tests, or changing their time on a scheduled meeting or test. To ensure that the system works properly, the team suggests that this system should run off the cloud; that way all user data is saved no matter where the user decides to change it.

### 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 System should be able to:  
  - Allow users to choose the kind of service/package they want, be it online, in real life, or both.  
  - Whenever a user starts their tests online, their current progress should be shown. Specifically, it needs to show the test name, time taken, score, and status of it. The status can show as not taken, failed, passed, or in progress.  
  - Liam wants to be able to see any comments, as well as time taken to complete lessons.  
  - Liam also wants to be able to track what staff member is matched with which customer, as well as the car they’re using and how much time they’re using.  
  - Lastly, Liam wants to be able to access information offline.

## 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 updated often to ensure that any bugs or security breaches are fixed. Also, if there are any changes to DMV guidelines, it should be updated immediately, to ensure that students enrolled at DriverPass are informed ASAP.
* To run, the system needs to be web-based.
* The system should run at a decent speed, considering it must send back and forth requests to servers. At DriverPass this speed should be quick, because of the users taking exams, etc.

#### 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 be able to run on major platforms like Google Chrome, Microsoft Edge, Firefox, Safari, etc.
* If the website is accessed on a mobile device, it should be able to resize and fit the screen accordingly.
* The back end would require a database to store information.

#### 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 distinguishes the difference between the user email and password.
* Input case sensitivity is a necessity for creating protection for users.
* If the user inputs their information incorrectly at a certain number of times, the system should alert the admin.

#### 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?*

* The system should be able to allow users to be added, removed, and/or modified without changing code. For this to functionality to be available, you would have to write in the code, POST requests, and controllers.
* The system adapts to platform updates by receiving any requests from the programmers/dev team.
* For an IT admin, they need access to user accounts, passwords, and remove unavailable employees, everything, pretty much.

#### 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?*

* When logging in, users, both students and administrators, are required to login with their password and username to get access.
* HTTP would be a requirement to ensure that the data exchanged between the client and the server is secure.
* If there is a "brute force" hacking attempt, the administrator should be alerted after a consecutive number of failed attempts. The number of failed attempts should be arranged between 1-10. After four failed attempts, two things will happen, the login in information will be inaccessible for the user to input their information, and the admin will be alerted.
* If the user forgets their password, they can simply put in a request to reset their password, the system should send password information to the user email address, and they can proceed 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 confirm consumer selection of the three packages the client wishes to include.
* The system shall confirm consumer details for example: customer first and last name, address, credit card information, phone, and state.
* The system shall be available solely online. However, some materials will be available offline such as study materials.
* The system shall confirm the type of user logging in i.e., student or administrator.
* The system shall display the three types of packages the client has suggested.
* The system shall allow the client to disable packages if one package is unavailable.
* The system shall display the disabled packages on the consumer side.
* The system shall allow users to reset passwords if needed.
* The system shall display exam progress and scores for the student.
* The system shall confirm login information from users so that they can access information.
* The system shall be adjusted to any DMV changes.

### 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.)?*

**Users will see:**

* Home Page
* Exam
* User Information (updating passwords, address, etc)
* Registration for new users
* Access to Grades
* Exam Status
* Notes (Be it the user’s or instructors)
* Contact Information  
  **Admins will see:**
* User Information to delete or add changes in case the user forgets their password.

### 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?*

* It’s safe to assume that the system will be available for access 24/7
* It's safe to assume that the users will be DMV students
* It is an assumption that the system will remain up to date with any changes in the DMV guidelines
* It is an assumption that there will be an app version of DriverPass available in the future

### 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 system requires a good and stable internet connection to be accessed. Without internet connection, user data cannot be updated according to any changes, nor added to the database, nor can it be accessed
* Another limitation is time and the set budget the client is willing to pay to maintain this system
* Because DriverPass is to help those study for their DMV, the materials and exams are based on the DMV guidelines
* The client currently has 10 cars, so the schedule needs to be accurately updated for students, so nothing gets mixed up

### 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.*

