# 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 is DriverPass, a company that provides training to people preparing for their DMV driver’s license test.
* The system needs to provide a method of scheduling driver’s training by purchasing one of three packages, then scheduling training sessions with the instructors, allow the owner to track any changes made to reservations, and provide updates to users on their progress.

### 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 sees a lack of available options for those working towards earning their driver’s license and wants to provide a method for better driver training for students hoping to earn their license.
* They want to provide online classes and test training, as well as on the road training.
* Allow users to maintain a profile that provides updates on their progress through the training program

### 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?*

* The system needs to provide a method of scheduling driver’s training by purchasing one of three packages, then scheduling training sessions with the instructors.
* The system should also allow full access to the owner to make any changes necessary.
* The system needs to provide notifications to the owner when the DMV updates rules and regulations.
* Users should be able to create a profile that will allow them to view their information, provide progress updates, and schedule appointments.
* The system needs to be accessible from anywhere, and reports should be available to download for employees with permission.
* There needs to be different levels of user permissions depending on what is required for each user.

## 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 needs to be web-based and accessible via Firefox, Safari, Internet Explorer, Chrome, and mobile web applications for customers and staff.
* Staff also needs the ability to access the system offline.
* The system must be updated when notified of DMV changes.

#### 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 needs to be accessible from Windows, Apple, and mobile platforms.
* There needs to be a back end database on the cloud that would be Linux based for ease and security.

#### 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?*

* Each user requires a unique case-sensitive user name and password that will be checked when creating an account. If a user tries to create a user name that is taken, they should be notified that the name is unavailable and create a different user name.
* The system should instantly notify admins of problems with the system via email.

#### 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 should have the ability to add, remove, or modify user accounts.
* IT admins should have complete access as a safeguard in case of catastrophic system failure, or to fix bugs.
* The system should be able to provide security updates, DMV updates, course updates for users, and schedule updates for staff on a regular basis.

#### 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 user must have a unique username and password combination to log in. The password must contain an uppercase character, lowercase character, and symbol to be accepted.
* All data sent and received needs to be encrypted. The preferred encryption algorithm is AES (Advanced Encryption Standard).
* All stored user data must be protected via encryption as well.
* In the case of a brute force attack, any account should be locked after 5 consecutive failed log-in attempts. This would require the ability to reset a password by email and/or admin.
* If a user forgets their password there should be an option to reset password via email on the login screen.

### 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 have the ability to work online or offline for admin.
* The system shall have the ability to be accessed via web browser on Windows, Mac, and mobile devices.
* The system shall have user roles that follow the principle of least privilege.
* The system shall keep a record of reservation additions, cancelations, and modifications.
* The system shall contain a schedule that is updated as reservations are booked or modified.
* The system shall have the ability to disable packages based on company needs.
* The system shall backup data regularly.
* The system shall have the ability to reset passwords automatically or via administrator.
* The system shall update as often as needed due to DMV changes to rules, policy, or sample questions.
* The system shall use secure storage and transfer of data.
* The system shall be able to display individual student’s progress and update as data is updated. This would show test names, time taken, score, and status.
* The system shall display a record of driving lessons including lesson time, start hour, end hour, and driver comments.
* The system shall provide contact information for the business that is accessible by students.
* The system shall save contact data for students that is only accessible by staff.
* The system shall contain practice tests and study guides for students.
* The system shall have an intuitive user interface for students and staff.
* The system shall have user pictures including driver and student photos.
* The system shall allow for students to input special needs that would be displayed on their profile page and accessible to instructors.

### 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 user interface must be individualized for each user. Students, staff, and admin will represent the three types of users. Students must be able to book lessons, take practice tests, access study materials, see their progress, information and schedules. Staff must be able to create accounts, provide notes and book, remove, and modify appointments. Administrators must be able to make changes and updates to the system, make changes or updates to customer profiles, delete customer profiles, and check and fix any bugs or security issues.

### 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?*

* Users must be customers or staff for DriverPass with a basic knowledge of web browsing. Students would have to have a car and the funds required to enroll in a course. They would also have a need for driver 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?*

* Users must have access to a stable internet connection.
* Users must have access to a Windows PC, Mac, or mobile device capable of connecting to the internet.
* All work must be completed within budget to meet the customer’s 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.*

