# 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 for our client, DriverPass, to be able to have a system that provides better driver training compared to whats currently out there.
* The training will be given to customers that use DriverPass as a way to have better prep going into a drivers test at a DMV.

### 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?*

* The biggest problem is that DriverPass wants to reduce the amount of people that fail their drivers test, and they want people to be more prepared to pass a drivers test before going through several attempts.
* DriverPass wants to offer online classes and practice tests to give tips and strategies that are important when it comes to completing a DMV drivers test.
* DriverPass also wants on-the-road training to be an option as well when it comes to their 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 should be able to do the following:
* **User Authentication and Authorization**:
  + Users should be able to log in securely with their credentials.
  + Different user roles should have appropriate access levels like administrator, trainer, customer, etc.

**Appointment Management**:

* + Users (both customers and administrators) should be able to schedule, modify, and cancel driving appointments.
  + DriverPass should be able to track appointment details such as date, time, instructor, and car.

**Online Classes and Practice Tests**:

* + Customers should have access to online classes and practice tests related to driving.
  + Progress should be tracked for completed and ongoing tests.

**Integration with DMV for Updates**:

* + The system should integrate with the DMV to receive updates on the most current laws, policies, and sample questions.
  + Notifications should be created whenever an update is available.

**Data Accessibility and Security**:

* + Data should be accessible online and offline, with security in place for each.
  + System should prevent duplicate data from being created.

**Reporting and Tracking**:

* + The system should provide reports on user activities, reservations, and training progress.
  + It should track user interactions and modifications within the system.

**Flexible Package Management**:

* + Administrators should be able to customize driving packages, allowing them to enable or disable certain features.
  + There should be a way to disable packages if needed.

**User Interface and Experience**:

* + The user interface should be intuitive and user-friendly.
  + Customers should easily be able to navigate through the system to find relevant packages and reservations.

## 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?*

* It should be running a web based cloud enviroment, with load times being around 1-2 seconds.
* The system should provide a note if the loading time exceeds 1-2 seconds.
* System should be updated once a month or more.

#### 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 platforms it should be able to run on are browsers like internet explorer, google chrome, firefox, and safari. Since this is a web based program, making sure these work on browsers that can be used on pretty much on every device is crucial.
* Back end would need a database to store user and system information, as well as a web server to manage and process requests, and send responses.

#### 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 should be able to tell between customers and employees with separate login pages for each.
* Passwords will be case-sensitive for each user of the program
* System would inform an admin of any problems that could happen on a daily basis

#### 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?*

* Changes to users will be done in back end development and won’t change the code already present
* The system should be able to adapt and update with any platform easily
* The IT admin needs to be able to access the database and web server to maintain and update the system.

#### 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?*

* Passwords would be required for each user to login
* Two factor auth could be used as an extra part of security
* Users could be locked out if failing to login after 5 tries
* “Forgot password” button would be important, and it would send a message to admins to allow the user 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 provide user authentication to ensure secure access to the platform.
* The system shall allow users to schedule driving lessons, modify existing appointments, and cancel appointments as needed.
* The system shall track user activity, including reservations made, modifications, and cancellations, providing a detailed log for auditing purposes.
* The system shall support online classes and practice tests for customers preparing for their driving tests.
* The system shall integrate with the Department of Motor Vehicles (DMV) to receive updates on driving rules, policies, and sample questions.
* The system shall categorize driving lesson packages, such as Package One, Package Two, and Package Three, each with different features and durations.
* The system shall enable administrators to customize driving packages, including adding, removing, or disabling packages.
* The system shall allow customers to register online, providing necessary personal information including name, address, phone number, and payment details.
* The system shall provide an intuitive user interface that displays driving test progress, including tests taken, in-progress tests, and completed tests.
* The system shall facilitate communication between users and administrators, allowing customers to contact the company for inquiries or support.
* The system shall maintain data integrity and security, preventing unauthorized access and ensuring the confidentiality of user information.
* The system shall provide flexibility for users to access data online from any device with internet connectivity.
* The system shall generate activity reports, including user actions, reservations, and system modifications, available for administrative review.
* The system shall allow users to reset their passwords in case of forgotten credentials, following a secure password reset process.
* The system shall operate in a web-based environment, accessible through standard web browsers, ensuring ease of access for users.

### 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 use the interface with a browser with a computer/phone/tablet.
* Different users would be customers, employees, and admins
* Customers should see the following, and be able to access:

1. Login/Register page
2. Home page
3. Test progress and score
4. Online tools
5. Contact information
6. Package info
7. Driver notes, lesson dates, and times
8. User info and allowing the customer to update their information
9. To be able to see what grade they got on a test

* For admins, they should see the following and be able to access:

1. Customer information
2. What packages are selected and by who
3. To be able to allow user password resets
4. To be able to remove packages
5. To be able to see what customers are with what drivers at a specific date and time

### 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?*

* **User Technology Proficiency**: The design assumes that users, including instructors, admins, and customers, have basic proficiency in using web-based interfaces and mobile devices.

1. **Internet Connectivity**: The design assumes that users have consistent internet connectivity to access the system and perform tasks.
2. **Device Compatibility**: It is assumed that the interface is compatible with a wide range of devices and screen sizes, including desktops, laptops, tablets, and smartphones.
3. **Administrative Access**: It is assumed that administrators and office staff have access to desktop computers or laptops for managing the system.
4. **Security Awareness**: It is assumed that users are aware of basic security practices, such as safeguarding login credentials and avoiding sharing sensitive information.
5. **Accessibility:** It is assumed that every user should have 24/7 online service, and users should be able to navigate the website easily. Customers and drivers will also have to be on time to their appointments too.

### 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?*

* Some limitations would be as follows:

1. There’s only 10 cars, with each car being able to be well maintained for both drivers and customers.
2. Users may not have up to date software
3. With the amount of cars and instructors, there can only be a few amount of appointments at a time
4. A big limitation is being able to meet budget and time frame restraints
5. Customers might only be comfortable driving in a small car or truck, so we’d need to accommodate for that as well.
6. Internet issues are always an issue, and may cause problems with the website if internet issues occur, such as delivering updates and giving users information.

### 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.*

