# 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, DriverPass wants to improve the driver training experience by providing additional online resources and drive time to those that need it.
* The system should give users access to online classes and practice tests. Users should also be able to sign up for on-the-road training.

### 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?*

* **Accessibility:** Data should be accessible from anywhere with the user’s ability to access or update the information online. Users should also be able to download some information/reports for offline use.
* **Security & Tracking:** Multi-level access based on the employee’s roles and responsibilities to prevent user data being available to those who don’t need it. The system should also track who made what update for easy visibility if things go wrong.
* **Reservations:** A reservation system should be included allowing users to reserve time for driving lessons. Users should be able to reserve time online, via phone call, or by visiting the office in person and set the location they would like to be picked up from.
* **Online Tests/Training:** Users should be able to take training and practice tests from the website to measure their knowledge of current subject matter provided by the DMV.

### 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?*

* **Accessibility:** The system should connect with the cloud via the internet to store user data until accessed.
* **Security:** The system should allow universal access to Liam for things like resetting user passwords or granting/restricting admin access to employees. Ian should have access to update or modify the system. The secretary should be able to create and update appointment information for users, and the user should be able to make or change appointments as well as access the user’s data.
* **Reservations:** The reservation system should allow users to sign up for 2-hour driving sessions at a set time and location. The system should be accessible online with access for the secretary to update reservations made over the phone or in person. This function should also assign one of 10 drivers to complete this session.
* **Packages:** Users should be able to pick between three unique packages determining if they will have 3, 4, or 6 driving sessions. If users choose package 1 they’ll get 3 driving sessions. If they choose package 2 they’ll get 4 and an in person lesson, and if they choose package 3 they’ll get 6 driving sessions and access to all of the online class content and testing within the system. Users with admin access should be able to add or remove packages as necessary.
* **Online Tests/Training:** The system should sync with the DMV database to update online course content with the most recent laws and information.

## 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 keep available appointment times and study materials accurate and up to date.
* This will be a web-based system, using the internet to connect with the DMV database for up-to-date testing materials.
* Information will need to be communicated quickly for drive time reservations to be confirmed and prevent multiple users from signing up for the same reservation. To do this, the system will need to prioritize speed.

#### 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?*

* A database will be needed for the system to store reservation details, availability, practice tests, and law details.
* Windows would be a recommended platform for this system as it is most commonly used. Cross platform compatibility would also increase the number of available users.
* Users using a mobile phone should still be able to access the system without their experience being impacted by the smaller screen.

#### 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 should have a unique login and password to identify one from another.
* These identifiers should be case-sensitive for extra precautions.
* The admin should be notified if a user requests help or has more than five incorrect login attempts.

#### 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 admin should be able to add/remove/modify users without changing the code.
* When the platform is updated, the system should also be updated to ensure that key functions are still optimized for any platform changes.
* The IT admin should have access to make user changes and key system updates.

#### 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 log in, the user will need their unique username and password.
* HTTP will be used to make sure the connection between the client and the server is handled securely.
* After 5 incorrect password attempts in a row (brute force hacking attempt), the admin is notified, and that user’s account is locked until the password is reset.
* If a user forgets their password, they can have a link sent to the email address linked to the username 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 offer the user a choice of three packages and log the user’s choice of package.
* The system shall provide learning materials and practice tests for users.
* The system shall make data accessible both online and offline.
* The system shall allow the user to modify/update data when the user is online only.
* The system shall be available to access from a mobile phone.
* The system shall limit user access and empower admins with full access to update user profiles.
* The system shall log user actions to be referenced later by the user or the admin.
* The system shall allow users to create, modify, and cancel reservations for drive time.
* The system shall log user reservations made both online and over the phone.
* The system shall assign a driver to each reservation, allowing the user to see who they’re driving with.
* The system shall allow the staff developer to add or remove modules or packages.
* The system shall allow the driving instructor to leave notes that remain in the user’s profile.
* The system shall show the user the tests/classes they currently have in process.
* The system shall allow the user to communicate with the admin and vice versa.

### 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 system will need to be accessible on both a computer via their browser and on a mobile device.
* The interface should be different for users and administrators.
* User interface should include:
  + Home page
  + New user registration
  + User login
  + User personal information
  + Learnings in process
  + Notes from driving instructors
  + Communication with the admin
  + Reservation request
  + Package selection
  + Practice tests/online learnings
* Admin interface should include
  + Access to user personal information
  + Access to reset user passwords for login
  + Access to view user logins/changes
  + Access to view all scheduled reservations
  + Access to add/remove packages

### 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 will be online when they access the system.
* The design will be simple enough for users to navigate the system without tutorial.
* Drivers will not need the system to view their reservations.
* Users will not miss their reservations
* Admins will have developer skills needed to add/remove packages

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### 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?*

* There are a limited number of drivers/vehicles.
* Vehicles will need to be maintenance regularly.
* If the user experiences connectivity issues while accessing the system, they will encounter issues with their information saving to their profile.
* Developers must operate within the constraints of the client’s budget.

### 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.*

*A calendar with different colored squares

Description automatically generated*