# 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 assignment is to develop a comprehensive machine for DriverPass, an agency aiming to offer better driver education. The device will provide online lessons, practice tests, and on-the-road training for customers.

### 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 desires the system to provide online driver education, which includes instructions and practice tests, schedules and manages on-the-road driving lessons, allows customers to access and control their accounts online, and tracks changes and activities within the system. The purpose is to address the high failure rate in DMV driving tests by providing better and more accessible education options. The system components include user account management, online education modules, reservation scheduling, activity tracking and reporting, and security features for different user roles.

### 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 provide a platform for online instructions and practice exams, allow customers to schedule, modify, and cancel driving lessons, enable access from various devices, track user activities and generate reports, and ensure secure login and user role management. Measurable tasks include implementing an online training module, creating a reservation system, developing a user management system with different roles, setting up activity tracking and reporting features, and ensuring easy data access and transfer.

## 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 internet-based, running on the cloud to ensure accessibility and scalability. It should run efficiently with short response times for user interactions and be updated frequently to incorporate changes in DMV rules and regulations.

#### 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 platform-independent and accessible from Windows, macOS, and mobile devices. The back end requires a robust database to support user management, reservations, and tracking functionalities.

#### 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?*

* Exclusive users should be distinguished using specific identifiers such as usernames or email addresses. Inputs must be case-sensitive, which is especially necessary for passwords. The system must inform the admin immediately if there are any issues, including failed login attempts or data inconsistencies.

#### 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?*

* User roles and permissions must be configurable without modifying the code. The system needs to adapt seamlessly to platform updates and modifications. The IT admin needs full access to all system functionalities for maintenance and user control.

#### 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?*

### Users are required to log in using specific credentials. Secure connections should be established using HTTPS. In case of a brute force hacking attempt, the account needs to be temporarily locked, and the admin should be notified.

### 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 during login. It shall allow customers to schedule, modify, and cancel driving lessons. The system shall provide access to online classes and practice exams. It shall track and record all personal activities, including reservations and changes. The system shall support different user roles with specific permissions and access levels. The system shall enable IT admins to manage user accounts and system settings

### 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 interface needs to be user-friendly and intuitive. Different users, including the owner, IT Officer, Secretary, and clients, will interact with the interface. The owner and IT Officer will have full system access, including user and system management. The Secretary will manage customer information and schedule appointments. Clients will schedule, modify, and cancel appointments and access online training materials. The interface will be web-based and accessible through browsers on both desktop and mobile devices.

### 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?*

* **Internet Access and Device Compatibility**: It is assumed that all users have reliable internet access and are using devices compatible with web-based applications, such as modern browsers on desktops, laptops, and mobile devices. This assumption is crucial for ensuring smooth system operation and accessibility.
* **User Competency**: It is assumed that users, including customers and administrative staff, have basic computer literacy and familiarity with using web applications. The system will be designed with an intuitive interface to accommodate varying levels of tech proficiency.
* **Data Management**: It is assumed that the cloud service provider will handle data backup, security, and compliance with data protection regulations. This includes ensuring that user data is securely stored and that backups are performed regularly to prevent data loss.
* **Technical Environment**: It is assumed that the technical environment, including server infrastructure and network capabilities, will be sufficient to support the system’s performance requirements. This includes having adequate server capacity to handle concurrent user access and interactions.
* **Regulatory Compliance:** It is assumed that the system will comply with all relevant DMV regulations and requirements and that these regulations will not change significantly during the development and deployment phases.
* **Third-Party Integration**: It is assumed that any third-party services or APIs used for features such as payment processing or authentication will be reliable and will integrate seamlessly with the DriverPass system.

### 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?*

* **Module Modification**: The initial version of the system will not allow non-developers to add or remove modules. This limitation means that any changes to the system’s functionality will require developer intervention, which could affect flexibility and responsiveness to changing needs.
* **Real-Time Updates**: Resource constraints may limit the extent to which real-time updates and data synchronization can be implemented. This could impact the timeliness of information updates and the system’s ability to reflect changes instantly across all users.
* **Budget and Time Constraints**: The project’s scope and features may be constrained by budget and time limitations. This means that certain advanced features or customizations might be deferred or excluded based on the available resources and timeline.
* **Performance Variability**: System performance may vary depending on the user’s internet connection quality. Users with slower connections may experience delays or reduced functionality, which could impact their overall experience with the system.
* **Scalability**: While the system is designed to be scalable, initial implementations may face limitations in handling a very high number of concurrent users or large volumes of data. Future upgrades may be required to address scalability issues as the user base grows.
* **Security Risks**: Despite implementing robust security measures, there are inherent risks associated with online systems, such as potential vulnerabilities to hacking attempts or data breaches. Continuous monitoring and updates will be necessary to mitigate these risks.
* **User Training**: The effectiveness of the system is dependent on the users' ability to learn and adapt to the new technology. Limited or insufficient training may affect how well users can utilize the system’s features and functionalities.

### 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 screenshot of a computer

Description automatically generated