# CS 255 Business Requirements Document Template

## 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 to develop a comprehensive system for DriverPass, which aims to provide students with effective training to pass their driving tests. DriverPass wants the system to offer online practice exams, on-the-road training scheduling, and secure data access from any device.

### 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 reduce the high failure rate of driving tests by offering better preparation tools. The system should provide online classes, practice tests, and scheduling for driving lessons. Key components include a web-based interface, a backend database, user authentication, role management, scheduling, tracking modules, and DMV compliance updates.

### 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?*

* Provide online access to practice exams and class materials.
* Enable customers to schedule, cancel, and modify driving lessons online.
* Track and log user activities for accountability.
* Support role-based access control for different types of users.
* Ensure compliance with DMV updates.
* Offer a secure and user-friendly interface accessible from various devices.

## 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 run as a web-based application.
* It should provide fast responses, ideally within 2-3 seconds for most user actions.
* The system should support real-time updates from the DMV and regular system updates.

#### 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 platform-agnostic, running on any modern web browser across Windows, macOS, and Unix-based systems.
* The backend will require a robust database, such as MySQL or PostgreSQL, to manage user data, scheduling, and tracking.

#### 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?*

* Users will be distinguished by unique usernames and roles (admin, IT officer, secretary, customer).
* Inputs, especially for passwords, will be case-sensitive.
* The system should inform the admin immediately if there are failed login attempts, reservation conflicts, or system errors.

#### 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 access levels should be manageable without changing the code, preferably through an admin interface.
* The system should handle platform updates with minimal downtime.
* The IT admin should have full access to manage user accounts, reset passwords, and perform system maintenance.

#### 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 will need a username and password to log in.
* Secure connections will be ensured using HTTPS and encryption for data exchanges.
* After multiple failed login attempts, the account should be locked, and the user should be notified.
* Users should be able to reset their passwords via a secure, automated process.

### 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 allow users to register and create accounts.
* The system shall enable users to make, cancel, and modify driving lesson reservations.
* The system shall provide online access to practice tests and class materials.
* The system shall log and track all user activities.
* The system shall manage role-based access control for different users.
* The system shall integrate with DMV updates and notify users of changes.
* The system shall allow for password resets via an automated process.

### 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 accessible from both mobile devices and web browsers.

• Different users include the owner (Liam), IT officer (Ian), secretary, and customers.

* Liam needs full access to view reports and manage the system.
* Ian needs full access to manage user accounts and system maintenance.
* The secretary needs access to schedule, cancel, and modify appointments.
* Customers need to access practice tests, class materials, and make appointments.

• The interface should support intuitive navigation, clear instructions, and responsiveness across 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?*

* It is assumed that users will have access to modern web browsers and reliable internet connections.
* It is assumed that users are familiar with basic online interactions, such as filling out forms and navigating web pages.
* It is assumed that the cloud service used for hosting will provide necessary security and backup capabilities.

### 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 design assumes constant internet connectivity for real-time data access and updates.
* There may be limitations in terms of budget for advanced security measures or extensive customizations.
* Time constraints may limit the scope of initial features, requiring future updates for additional 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