# 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?*

Creating a system for DriverPass is the aim of this project. Better driver education and test preparation are the goals of this business. The local Department of Motor Vehicles (DMV) administers the driving test. Liam, the business owner, needs the system to manage many facets of their business, such as online classes, practice exams, scheduling driving lessons, tracking reservations, managing user accounts, and preserving current DMV data.

### 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?*

Online driver instruction, practice tests, and the option to book driving lessons are all features that DriverPass wants the system to offer. The business provides thorough training services in an effort to address the issue of high driving test failure rates. User registration, account management, reservation monitoring, matching of drivers and vehicles, online and offline data access, data security, user roles and privileges, and interaction with the DMV for updates are all tasks that the system must manage.

### 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?*

Users should be able to register, access online classes and practice exams, book driving lessons, keep track of reservations, manage user accounts, and receive reports on activity and progress once the system is finished.

Measurable tasks for the system design include:

* Create a user registration module with fields for contact information, payment information, and personal data.
* Implement a lesson plan including content, resources, and sample exams online.
* Create a scheduling tool that allows users to reserve driving lessons, indicating the time, date, and instructor.
* Create a system for tracking reservations that connect users with drivers and vehicles.
* Create a user account management system with a range of privileges and roles.
* Integrate with the DMV to receive laws, regulations, and test question updates.
* Users should be able to download and use reports offline, including data access and offline capability.
* Create a user interface with the expected appearance, progress monitoring, and driver notes.

## Requirements

### Nonfunctional Requirements

#### 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?*

* Any computer or mobile device must be able to access the system because it must be a web-based application.
* The system should be quickly synchronized with routine DMV changes and updated when necessary.

#### 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 cross-platform, run on various platforms, including Windows, Unix, and mobile operating systems, and be platform-independent.
* The system will need a database to support data storage and retrieval.

#### 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?*

* User authentication and authorization should be implemented correctly to distinguish between different users.
* The system should implement a solution to give alerts in case of any issues.

#### 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?*

* Modifying User information should be convenient within the system without altering the underlying programming.
* The IT administrator should have complete access and authority to manage user accounts and perform required tasks.

#### 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?*

* Secure login credentials should be used for user authentication.
* Encryption techniques should safeguard the connection and data transfer between the client and the server.
* The system should take appropriate action in the event of a "SQL injection" hacking attack, such as blocking particular IP addresses or stepping up security precautions.
* The system should include a password reset capability for users who forget their passwords.

### 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:

* Verify user credentials when logging in.
* Give option to schedule driving lessons for users, letting them choose the day, time, and instructor.

### 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.)?*

* Offer a user-friendly user interface that is available on mobile and web browsers.
* Assist Liam (the owner), Ian (the IT officer), the secretary, and the clients in their various user roles.
* Give Liam access to and control over every user account and system setting.
* Customers should be able to register online by entering their first and last names, addresses, phone numbers, states, and credit card information.
* Consumers should be able to book driving lessons online, indicating their chosen date, time, and driver.
* Clients should be able to see lesson comments in case there are any.

### 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?*

* Customers feel safe sharing personal information, such as credit card information, online.
* A cloud platform will host the system, which will be constructed utilizing web technologies.
* With space for modifications and enhancements, the interface design will be based on the submitted sketch.
* The system will primarily manage administrative tasks associated with driver instruction, not including extra features like online chat or live streaming for classes.

### 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 scale and complexity of the system may be constrained by the resources allotted to the project, such as the development team and budget.
* The system design may need periodic modifications and maintenance to keep up with evolving laws and technologies.

### 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.*

