# 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?*

* This project's purpose is to address the need for better driver training, particularly in preparation for driving tests at local DMVs. DriverPass aims to provide online classes, practice tests, and on-the-road training to improve the success rate of driving test candidates.
* The client, Liam, the owner of DriverPass, expects the system to support both online and offline access to data, facilitate online classes, practice tests, and on-the-road training. Additionally, the system should ensure data security, user-friendly interface, and scalability to accommodate increasing user demands.

### 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 aims to fix the deficiency in driver training for individuals preparing for DMV tests.
* Components Needed:
  + Online exam module
  + On-the-road training module
  + User management system
  + Reservation tracking system

### 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?*

Upon completion, the system should:

* Provide a user-friendly interface for online classes, practice tests, and on-the-road training.
* Facilitate integration between online exams and on-the-road training.
* Ensure system scalability to accommodate increasing user demands.
* Enable reservation scheduling, modification, and cancellation for driving lessons.
* Support tracking of reservations, including driver assignments, times, and modifications.
* Allow users to reset passwords automatically if forgotten.
* Ensure compliance with DMV regulations by enabling updates on rules, policies, and sample questions.
* Provide a cloud-based system for easy access and minimal technical issues.
* Feature a customizable interface based on user preferences and requirements.
* Include reporting capabilities to track user progress, test results, and system activities.

## 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?*

* System should run on web-based and application environments.
* Response time for online exams within 3 seconds.
* Weekly system updates for new exam questions and training materials.

#### 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?*

* System compatibility with Windows and Unix platforms.
* The back end requires a robust database for efficient data management.

#### 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 input is case-sensitive.
* Immediate notification to admin in case of technical issues.
* Accurate user role distinctions.

#### 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 modifications (add/remove/modify) should be possible without changing the code.
* The system should adapt seamlessly to platform updates
* IT admin requires full access to configure and manage 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?*

* User login requires secure authentication.
* Secure data exchange protocols should be implemented.
* Brute force attempts should result in account lockout
* Password recovery process 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 validate user credentials when logging in.
* The system shall provide a diverse set of practice exam questions.
* On-the-road training module shall simulate real-world driving scenarios.
* Performance analytics shall track user progress.

### 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: Liam (owner), Ian (IT officer), secretary, students, instructors, administrators.
* Interface needs for students: Access to exams, training materials, appointment scheduling.
* Interface needs for instructors and administrators: Dashboard for user management and analytics.

### 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?*

* Assumed user proficiency in basic technology usage.
* Assumed availability of internet connectivity for users.
* Assumed regular updates to exam questions and training materials.

### 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?*

* System limitations may arise due to budget constraints.
* Resource limitations in terms of development time and technology availability.

### 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.*

