# CS 255 Business Requirements Document

## 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?*

DriverPass aims to develop a system that provides students with online practice exams and on the road driving training. The system must support scheduling, tracking, and reporting functionalities while maintaining accessibility, security, and flexibility.

### 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 seeks to address the high failure rate of driving exams by offering a structured training solution. The system will include the following:

* Online practice exams
* On the road training reservations
* User management with different access levels
* Secure payment processing and scheduling
* Integration with DMV 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?*

* Enable students to register, schedule, and modify appointments online.
* Allow administrative staff to manage users, schedules, and payments.
* Provide secure role based access to maintain system integrity.
* Generate reports for tracking reservations, payments, and system usage.
* Support cloud based access for seamless use across multiple devices.

## 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?*

* The system shall be a web based application accessible via browsers.
* The system shall respond within 2 seconds for most user actions.
* System updates shall be deployed quarterly to ensure stability and feature improvements.

#### 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 shall be compatible with Windows, macOS, iOS, and Android.
* The backend shall use a relational database to store user and scheduling data.
* Cloud hosting services shall be utilized for scalability and maintenance.

#### 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?*

* The system shall track modifications to reservations and log user activities.
* Data entry validation shall ensure accuracy in customer registrations and transactions.

#### 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 system shall allow IT administrators to enable/disable packages without code modifications.
* The platform shall be updated automatically without user intervention.
* The IT officer shall have administrative access to manage system configurations.

#### 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 shall authenticate using secure credentials (email/password with hashing).
* Sensitive data, such as credit card details, shall be encrypted during transmission.
* Failed login attempts shall trigger account locking after 5 unsuccessful tries.
* Password reset functionality shall be available for users who forget their credentials.

### 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 allow students to create, modify, and cancel reservations.
* The system shall validate user credentials upon login.
* The system shall provide an admin panel for IT officers to manage users and reservations.
* The system shall track and log all modifications to schedules and accounts.
* The system shall integrate with DMV updates for compliance with current regulations.

### 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 shall be web based with a responsive design for mobile compatibility.
* The interface shall provide separate views for students, secretaries, and IT administrators.
* The student dashboard shall display upcoming lessons, progress, and practice test results.
* The admin interface shall include options for managing users, reservations, and reports.

### 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 have access to an internet connection.
* Customers possess basic computer literacy to navigate the online portal.
* Payments are processed through a third party provider.

### 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 initial version shall not support live chat or customer support ticketing.
* System customization (adding new packages) will require developer intervention.

### Gantt Chart

