# CS 255 Business Requirements Document Template

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## System Components and Design

### Purpose

The purpose of the DriverPass system is to improve student success on DMV driving exams by providing a combined platform for online practice, study materials, and on-the-road training. The system is designed to increase convenience, security, and flexibility for customers while reducing operational inefficiencies for staff.

* **Primary Goal:** Provide students with resources beyond studying old exams, addressing the high failure rate (65%+) at the DMV.
* **Accessibility:** Allow customers to access their accounts and training materials securely from any device, anywhere.
* **Training Options:** Support tiered client-level packages that combine varying amounts of driving hours, in-person instruction, and online practice tests.
* **Operational Support:** Enable staff to manage reservations, track customer progress, and oversee system use through role-based access.
* **Business Value:** Establish DriverPass as a trusted solution for comprehensive driver preparation, aligning with DMV requirements and market demand.

This clear purpose sets the foundation for the system’s design, ensuring the solution addresses both customer training needs and DriverPass’s business objectives.

### System Background

### DriverPass needs a system that addresses the high failure rate of DMV driving tests by combining online study tools with on-the-road training. The system should support multiple users with varying levels of access, ensure security, and stay current with DMV regulations.

* **Training Packages:** Offer tiered options, such as 6, 8, or 12 hours of driving, with combinations of in-person lessons, online practice tests, and study materials.
* **Scheduling:** Allow customers to make, cancel, or modify lesson reservations online, by phone, or in person. Track which customer is matched with which driver, car, date, and time.
* **User Roles:** Support different roles with appropriate access, such as administrators (full system control), IT staff (maintenance), secretaries (scheduling), and customers (package selection, payments, scheduling).
* **Data Management:** Provide secure online access to account information, reports, and activity tracking. Allow the export of data (to Excel) while preventing redundancy.
* **Compliance:** Stay updated with DMV rules and test changes; notify DriverPass when updates are available.
* **Security and Tracking:** Log all changes (reservations, cancellations, modifications) with clear records of who made each action.
* **Platform:** Web-based, cloud-hosted solution with built-in backup and security features to reduce DriverPass’s technical overhead.

This background establishes the framework for a system that not only meets DriverPass’s immediate business goals but also supports future flexibility and scalability.

### Objectives and Goals

The goals of the DriverPass system are to improve student success on DMV driving exams, streamline administrative operations, and support long-term business growth. The following mapped objectives outline the measurable steps that will enable these goals to be achieved.

**Goal 1: Improve student success rates on DMV exams**

* Provide students with secure accounts accessible on any device.
* Offer online practice exams and DMV-aligned study materials.
* Allow students to schedule, modify, or cancel driving lessons online.
* Track student progress through scores, lesson history, and completion status.

**Goal 2: Streamline administrative and instructional operations**

* Enable staff to schedule lessons on behalf of students by phone or in person.
* Store student registration and payment details securely.
* Generate and print reports for reservations and student activity.
* Allow instructors to view assigned schedules and record feedback after lessons.

**Goal 3: Strengthen system reliability and security**

* Use role-based access to manage user accounts and permissions.
* Provide automated password resets and secure cloud hosting.
* Track user activity, such as who created, modified, or canceled reservations.
* Connect with DMV systems to receive updates on policies, rules, and exam content.

**Goal 4: Support DriverPass business strategy and future growth**

* Improve customer satisfaction by reducing manual errors and paperwork.
* Maintain flexibility to disable or update training packages as business needs change.
* Build a scalable system that can expand with additional services or customization in the future.

## Requirements

### Nonfunctional Requirements

The DriverPass system must also satisfy the following quality and performance expectations:

#### Performance Requirements

#### The DriverPass system will operate as a cloud-based, web-accessible application that runs on modern browsers and mobile devices.

* The system will load pages and process requests within 2–3 seconds under normal operating conditions, ensuring consistent performance for users.
* Updates will be scheduled regularly outside of peak hours to reduce downtime.

#### Platform Constraints

#### The platform will support multiple operating systems (Windows, macOS, mobile OS) through a browser interface.

* A secure, cloud-hosted relational database will serve as the back end for accounts, reservations, and reports.
* System design will rely on widely supported web technologies to ensure compatibility.

#### Accuracy and Precision

* Each user will be uniquely identified through secure login credentials.
* All inputs, such as names, payment details, and scheduling information, will be validated to reduce errors.
* Administrators will be notified of issues such as duplicate reservations or access failures.
* Case sensitivity will be enforced for login credentials to prevent unauthorized access.

#### Adaptability

* Administrative staff can add, remove, or modify users and disable packages without requiring developer changes.
* The system will remain compatible with updates to operating systems and browsers.
* IT administrators will retain full access for system monitoring and maintenance.

#### Security

* Role-based authentication will be required for all users.
* Secure encryption protocols (HTTPS/SSL) will protect data exchange between client and server.
* Accounts will be locked after repeated failed login attempts to reduce brute-force risk.
* Automated password reset functions will be available to users.
* Multi-factor authentication will be available as an option to add an extra layer of protection when users log in, especially for accounts with access to sensitive data.

### Functional Requirements

* The system shall allow students to create accounts and log in securely.
* The system shall allow students to purchase tiered training packages and access online lessons, practice exams, and study content.
* The system shall allow students to schedule, cancel, or modify driving lessons.
* The system shall allow secretaries to record student information, manage reservations, and print reports.
* The system shall assign instructors and vehicles to lessons and track scheduling conflicts.
* The system shall allow instructors to view their schedules and enter notes or feedback.
* The system shall generate reports summarizing reservations, activity, and student progress.
* The system shall remain connected to DMV updates for test rules, policies, and new content.
* The system shall allow administrators to reset passwords, block access, and disable packages.

### User Interface

* The system interface must be browser-based, responsive, and mobile-friendly.
* Students will interact with the interface to purchase packages, manage reservations, and access study resources.
* Secretaries will use the interface to enter data, handle appointments, and produce reports.
* Instructors will use the interface to check assigned lessons and submit student feedback.
* Administrators will use the interface to manage accounts, review activity, and control package offerings.
* Students should also be able to view their practice exam results, past scores, and overall progress from their account page so they can track improvement.
* User profiles will provide a simple summary of history, including completed lessons and past appointments, all organized in one place.

### Assumptions

* Users will have consistent internet access.
* Users will possess basic computer or mobile device skills to navigate the platform.
* The DMV will deliver updates in a timely manner and in a usable format.
* Cloud service providers will maintain system uptime, security, and data backups.
* In the future, a dedicated mobile app could be developed to make the platform even more accessible, although the current design focuses on web-based access.

### Limitations

* DriverPass will depend on cloud vendors and internet service providers, which may cause downtime outside the company's control.
* The project budget and time frame limit the addition of advanced features, such as fully customizable packages without developer involvement.
* The system cannot entirely eliminate risks of cyberattacks or unauthorized access, despite encryption and account lockouts.
* Human error in scheduling or data entry may still occur despite automated controls.
* Because the system is primarily web-based, it may not be able to send push notifications (like appointment reminders) as easily as a mobile app can.

### Gantt Chart

The Gantt chart below outlines the project timeline, including major phases such as planning, development, testing, and implementation.

A graph with multiple colored squares

AI-generated content may be incorrect.