# CS 255 Business Requirements Document - DriverPass

## System Components and Design

### Purpose

The purpose of the DriverPass system is to provide a complete driver-training solution that combines online study materials, practice tests, and in-person driving lessons. The system will help students prepare for their DMV driving exams and improve their chances of passing. It will also allow administrators and staff to manage users, lessons, vehicles, and instructors efficiently.

### System Background

DriverPass identified a gap in the market for reliable, technology-driven driving-test preparation. Many students fail their DMV exams because they lack access to quality training resources. DriverPass seeks to provide both online and on-the-road training through a cloud-based platform that allows students to register, schedule driving lessons, and take practice exams. The system must also accommodate staff functions such as scheduling, recordkeeping, and tracking progress.

### Objectives and Goals

The objectives of the DriverPass system include the following:

* Provide online access to driving courses and practice exams.
* Allow students to schedule and manage driving lessons.
* Enable staff to track student progress and test results.
* Ensure secure storage of user data and payment information.
* Support role-based access for different user types (students, instructors, staff, and IT personnel).
* Maintain accurate records of all activities, including reservations, cancellations, and user actions.
* Improve student pass rates through structured learning and testing tools.

## Requirements

### Nonfunctional Requirements

* The system must allow multiple user roles with appropriate permissions and access control.
* User data must be securely stored and transmitted through encrypted connections.
* The system should be available online 24/7 with 99% uptime reliability.
* The design must provide a responsive interface that works across desktops, tablets, and mobile devices.
* All system updates must be applied without interrupting user access.

#### Performance Requirements

* The system must display web pages and retrieve data in under five seconds under normal operating conditions.
* Lesson scheduling, user authentication, and test submissions should process within ten seconds.
* Reports, such as student progress and activity tracking, should generate within one minute.
* The system should handle at least 500 concurrent users during peak hours without performance degradation.

#### Platform Constraints

* The DriverPass system will operate as a web-based cloud application.
* It will rely on a secure cloud database for storing user data, course materials, and test results.
* The platform will use a modern web stack compatible with major browsers and mobile devices.
* Integration with DMV systems and external APIs will be required for updates to rules, policies, and test materials.

#### Accuracy and Precision

* The system should correctly track lesson reservations and updates by recording who created, modified, or canceled each record.
* Test scoring should calculate automatically and precisely reflect the student’s correct and incorrect responses.
* Administrators should be able to generate accurate reports of all activity logs.
* Payment transactions must validate credit card data to ensure accuracy and prevent errors.

#### Adaptability

* The system should be adaptable to future feature additions such as new lesson packages or revised pricing models.
* It should accept DMV updates automatically, with notifications sent to administrators when new materials are available.
* The platform should support scalability to handle a growing number of users without requiring major redesigns.

#### Security

* All passwords must be stored using encryption and secure authentication protocols.
* Users must have role-based permissions to prevent unauthorized access.
* The system must automatically lock accounts after three failed login attempts.
* Payment data must comply with PCI-DSS security standards.
* A log of all user actions should be maintained to support auditing and accountability.

### Functional Requirements

* The system shall allow students to create and manage accounts online.
* The system shall allow students to register for driving packages and schedule lesson times.
* The system shall record reservations, cancellations, and modifications.
* The system shall provide access to online courses and practice exams.
* The system shall track student progress, including lesson completion and test scores.
* The system shall allow staff and instructors to update records, leave notes, and view schedules.
* The system shall allow administrators and IT staff to manage user accounts, reset passwords, and monitor activity.
* The system shall generate printable or downloadable activity reports.

### User Interface

* The system interface will be accessible via a secure web portal.
* It will include user dashboards for students, instructors, and administrators.
* The interface will display test progress, lesson history, and performance statistics.
* Students will navigate through a simple menu structure with options such as “My Lessons,” “Online Tests,” “Payments,” and “Support.”
* Administrative screens will provide search, filtering, and reporting tools.
* The system will provide visual indicators for test completion, lesson schedules, and alerts for upcoming appointments.

### Assumptions

* Users will have a stable internet connection and access to a compatible web browser.
* The system will be hosted on a reliable cloud platform with continuous uptime.
* DMV data will be available through an accessible API or upload service.
* Instructors and staff will receive training before using the system.
* Credit card processing will be handled through an approved third-party payment service.

### Limitations

* The system will not support offline functionality except for limited viewing of downloaded reports.
* The system will not include voice-activated controls or speech interfaces.
* The system will depend on DMV data accuracy for current training materials.
* The system will not provide real-time GPS tracking for instructors or vehicles in the initial release.
* Any major feature additions (e.g., new course types or packages) will require a future update.

### Gantt Chart

A graph of a project

AI-generated content may be incorrect.