# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

* The purpose of this project is to design and develop a system for DriverPass that will support their mission of improving driver training.
* The client wants a web-based system that allows customers to schedule driving lessons, access online learning materials, take practice tests, and track their progress.
* The system should also allow DriverPass staff to manage users, appointments, drivers, vehicles, and training packages efficiently.

### System Background

* DriverPass identified a gap in the market where many students fail the DMV driving test due to insufficient preparation.
* To solve this, DriverPass aims to provide comprehensive driver training, including online learning, practice exams, and in-person driving lessons.
* The system should support:
* Online class content and practice tests.
* Scheduling and managing driving lesson appointments.
* Managing trainers, cars, and appointment logistics.
* Role-based access for users like administrators, IT personnel, secretaries, and students.
* Cloud access to allow for remote data entry and reporting.

### Objectives and Goals

* Provide students with the ability to register online and schedule, cancel, or modify their driving appointments.
* Enable DriverPass staff to manage and track student appointments, instructors, cars, and training packages.
* Allow IT and administrative users to monitor system usage, generate activity reports, and manage user roles and access.
* Display user progress for online classes and practice tests, including test names, scores, and statuses.
* Provide security features such as password resets, login authentication, and activity logging.
* Ensure the system can run securely in the cloud and allow future modifications like enabling/disabling packages.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system must operate as a cloud-based, web-accessible platform optimized for both desktop and mobile browsers. Page load times should not exceed three seconds under normal load, and the system should maintain an uptime of 99.9%. Updates and patches should be applied quarterly or as needed for performance, bug fixes, and security improvements.

#### Platform Constraints

* The system must function on modern web browsers including Chrome, Firefox, Safari, and Edge, regardless of operating system (Windows, macOS, or Linux). The backend must support a relational database system such as MySQL or PostgreSQL, and the application will be hosted on a secure, scalable cloud service like AWS or Microsoft Azure.

#### Accuracy and Precision

* Each user will be identified by a unique email address or username. Login credentials and key form fields will be case-sensitive where appropriate. Administrators should receive notifications for errors, failed logins, scheduling conflicts, or duplicate entries. Logging and tracking should ensure traceability of all user actions.

#### Adaptability

* System configuration, such as enabling or disabling training packages or managing user roles, must be adjustable from the admin interface without changing the codebase. The system should be compatible with browser and platform updates. IT administrators will require full access to user management, system settings, and audit logs.

#### Security

* All users must authenticate with a secure username and password combination. The system must use HTTPS for encrypted data transfer and encrypting sensitive data at rest. After five failed login attempts, accounts will be temporarily locked to prevent brute force attacks. Password reset functionality must be available through email verification.

### Functional Requirements

* Students will be able to register for an account, manage their profile, and schedule driving lessons through the online portal.
* The system will verify login credentials to protect user access and data.
* Scheduling features will allow students to view available times, book appointments, reschedule, or cancel sessions.
* Each appointment will link a student to a specific date, time, driver, and vehicle, with conflict checking to avoid double bookings.
* Secretaries can manually input or modify appointments on behalf of customers who call or walk in.
* Admins can enable or disable specific training packages based on availability or business needs.
* The system will keep a log of all user activity including logins, changes to bookings, and administrative actions.
* Students will be able to view their progress in online classes and practice exams, including test name, score, time taken, and pass/fail status.
* IT administrators will be able to reset user passwords, manage access levels, and configure system-wide settings.

### User Interface

* The interface must be web-based and responsive for access via desktop and mobile browsers.
* Students must be able to register, log in, manage appointments, view progress, and reset passwords.
* Secretaries must be able to input and manage student data and appointments.
* IT administrators must be able to monitor usage, manage roles, reset accounts, and generate reports.
* The UI should be intuitive, clean, and provide quick access to key functionality with a low learning curve.

### Assumptions

* Users are expected to have access to a stable internet connection and a modern web browser to interact with the system effectively.
* DriverPass staff are familiar with using administrative tools and require minimal training for system onboarding.
* The system will be supported by a cloud hosting provider capable of handling data backups, security, and scalability.
* DMV content updates will be provided in a format that can be manually or semi-automatically imported into the system.
* Sufficient budget and technical support are available to maintain ongoing system operations and future enhancements.

### Limitations

* Real-time GPS tracking of vehicles or live appointment updates is not included in the initial system.
* Integration with DMV systems for automatic updates is not part of the first release.
* The system does not currently support multilingual interfaces or accessibility standards beyond basic responsive design.
* Time and budget constraints limit the system to core features during initial development, with enhancements to follow based on feedback.

### Gantt Chart

A graph with colorful squares

AI-generated content may be incorrect.