# CS 255 Business Requirements Document McNaney

## 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?*

• The goal of this project is to design a DriverPass system that helps customers prepare for their driving tests.

• The client, DriverPass, is owned by Liam, with Ian handling IT. They want a system that supports both online and in-person driving training.

• The system should let customers sign up, take online classes, complete practice tests, and schedule driving lessons.

• It also needs to help the business stay organized with student data, schedules, drivers, and reports, all stored securely in one place.

### 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 noticed a big gap in driver training—too many people fail the DMV test. They want to fix that by offering lessons, practice tests, and resources in one system.

• The main problem is that their current process isn’t centralized or efficient. The new system will connect all parts of the business: customer accounts, lesson scheduling, and online coursework.

• Key parts of the system will include:

A web-based platform customers can use anywhere.

Separate access levels for admins, the IT officer, secretaries, instructors, and students.

Lesson scheduling with assigned cars and drivers.

DMV integration for rule and test updates.

Activity tracking and reporting for accountability.

### 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?*

• Make it easy for customers to schedule lessons, take practice tests, and track their progress.

• Give staff and admins tools to manage appointments, cars, and instructors.

• Allow the IT admin to handle user accounts and permissions.

• Keep a record of all user activity so the company can see who made changes.

• Ensure the system is secure, accessible online, and reliable.

• Make the system flexible enough to enable or disable training packages without major changes.

• Follow the development schedule to have the full system ready for sign-off around May 10th.

## 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?*

• The system will run as a cloud-based web app, so it can be accessed from any computer or mobile device.

• It should load quickly (around two seconds per page) and handle multiple users at once.

• Updates and backups will happen automatically through the hosting service.

• Data should sync in real time to prevent duplicates or version conflicts.

#### 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 web app should run smoothly on Windows, macOS, and mobile browsers.

• A back-end database (like MySQL or SQL Server) will store all course, user, and appointment information.

• The cloud host will take care of backups, security, and scaling.

#### 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?*

• Each user will log in with unique credentials.

• Input fields like names or addresses don’t need to be case-sensitive, but passwords will be.

• System admins should be alerted if login errors or system issues occur.

• The system should log who created, changed, or canceled appointments.

#### 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?*

• Admins should be able to add, update, or remove users without touching the code.

• The system will be flexible enough to stay compatible with future browser or platform updates.

• The IT admin (Ian) will have full access to system settings, permissions, and maintenance tools.

• Future updates could include new course packages or additional DMV data integrations.

#### 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?*

• All users must log in securely, with encrypted passwords and HTTPS connections.

• All communication between the client and server must be encrypted.

• If a user fails multiple login attempts, the account will temporarily lock to stop brute-force attempts.

• If a user forgets their password, they can reset it automatically through email.

• Admins can deactivate or block users when needed (for example, if someone leaves the company).

### 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 will allow customers to register, log in, and update their profiles.

• The system will let customers book, modify, or cancel driving lessons online.

• The system will let office staff schedule lessons by phone or in person.

• The system will automatically match each reservation with an available driver, car, date, and time.

• The system will let admins reset passwords and manage user roles and permissions.

• The system will track and log all user actions, such as bookings, cancellations, and changes.

• The system will create and export reports on schedules, user activity, and student progress.

• The system will connect to the DMV database to receive updates on rules, policies, and test materials.

• The system will show online test progress with details like test name, time taken, score, and status.

• The system will allow instructors to record notes and lesson feedback.

• The system will let admins enable or disable specific training packages.

### 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.)?*

• Main user groups: Admin (Liam/Ian), Secretary, Instructor, and Student.

• Admins need a dashboard to view reports, manage users, and monitor activity logs.

• The secretary will need a clean interface to schedule or edit lessons for customers.

• Students should see:

Practice tests and course materials with their progress status (not taken, in progress, failed, passed).

Options to book, cancel, or reschedule lessons.

Access to instructor comments and lesson details.

• Instructors will use a simplified view to check their assigned lessons and leave notes.

• The system should have a modern, web-based interface that also works well on mobile devices.

### 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 reliable internet access and use up-to-date browsers.

• The DMV will keep its data connection active for rule and test updates.

• Cloud hosting will handle backups, performance, and security.

• Payment processing may happen through a third-party service outside this system.

• Future releases may include new features once the main system is stable.

### 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 system can’t be used offline for adding or updating data—an internet connection is required.

• Non-developers won’t be able to add new modules without technical support.

• Time and budget constraints mean DMV integration and reporting tools will be limited in version one.

• DriverPass will rely on its cloud provider for uptime and maintenance.

• The project timeline (January–May) restricts how many extra features can be included in the first release.

### 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.*

A screenshot of a project

AI-generated content may be incorrect.