# CS-255 Project One Business Requirements Document

## System Components and Design

### Purpose

* DriverPass is a business focused on simplifying the training process for new drivers to pass their necessary tests at the DMV.
* They would like to build an online system that allows users to register for their services through various available packages and be able to track their progress on their driver training journey.
* DriverPass wants to maintain a connection with the DMV in order to keep their system up to date with updated requirements and regulations.

### System Background

* DriverPass seeks to improve the process for new drivers to train for and pass their driving test.
* They have noticed that many people fail their driving test at the DMV and want to address this problem by creating a centralized system where users can be given a training program to achieve their license.
* DriverPass wants to create a system that lets users be assigned to a driver, schedule lessons, access instructor notes, take practice tests, and receive test results in a centralized and easy to navigate interface.

### Objectives and Goals

* The system should be operated on the cloud, with all security and backup needs taken care of by the cloud provider.
* The system should run on the web, with the ability to download data from the system to use in offline settings.
* The system should be connected to the DMV’s database in order to remain up-to-date with any new changes made by the DMV, and DriverPass should receive a notification anytime there is an update.
* The system should allow for a user to schedule, modify, or cancel appointments for driving lessons online. Each appointment should have a user assigned to a driver, with a date and time set for each lesson. All record changes in the system should be tracked in a database that can be accessed by members of DriverPass with the appropriate rights.
* The system should allow full access over accounts to the IT officer of DriverPass, in case users get locked out or need to modify their account through the backend.
* The system should offer different packages to the user to register for, with the ability for DriverPass to disable programs if they choose to discontinue them.
* The system should have pages to input registration information and a contact page for users to get in touch with DriverPass, as well as a built-in method for DriverPass to contact users, if necessary.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system should allow web-based access from any computer or mobile device.
* The system must be able to handle simultaneous access by multiple users (including students, secretaries, drivers, and administrators).
* Data access and updates should occur in real-time (or close to it) when online.

#### Platform Constraints

* The system should run as a web-based application hosted on the cloud.
* The system should support access for all major browsers on desktop, as well as allowing for mobile access.
* The system should integrate with Microsoft Excel and Google Sheets for exporting reports and data, available for offline access.

#### Accuracy and Precision

* The system must accurately track and report user actions (such as scheduling, modifying, or cancelling reservations) to administrators.
* The system must match each student to their corresponding driver, car, and appointment time (as specified in their reservation).
* Test scores and lesson data (including driver notes) must be accurately stored and displayed for each student.
* Each user must create a unique User ID.
* Input for the system is case-insensitive, except for user passwords.

#### Adaptability

* The system must allow administrators to easily disable lesson packages.
* The IT admin should have full access to user accounts (in case a password needs resetting or departing employees need to have access right revoked).
* Future releases should allow for the addition/removal of modules or packages onto the system (but may require developer support).
* The system should allow for maintenance and modifications by the IT administrator only.

#### Security

* The system must have role-based access controls, allowing different rights for administrators, secretaries, drivers, and students.
* Administrators must be able to reset / disable user accounts, especially in the case of an employee being let go.
* Sensitive data (especially credit card info) should be securely handled and stored via the cloud provider.
* The system will require a user’s unique User ID, as well as a case-sensitive password containing at least one uppercase letter, one lowercase letter, one number, and one special character (?,!,@,$, etc.) that is at least 8 characters long.
* Users can reset their password automatically online, or by contacting the IT department for a manual reset.
* The password reset functionality must be secure (possibly using MFA for verification). If a user reports a brute force hack on their account to the IT department, their password will be manually reset.
* An SSL connection will be utilized to secure the connection between the client and the web server communication.

### Functional Requirements

* The system shall allow customers to register, provide personal information, and create an account.
* The system shall allow users to reset their password automatically through the system, if forgotten.
* The system shall allow customers to schedule, cancel, and modify driving lesson appointments.
* The system shall allow secretaries to create, modify, or cancel appointments for customers.
* The system shall track which customer is scheduled with which driver, car, and time slot.
* The system shall allow customers to select from a variety of lesson packages.
* The system shall allow administrators to disable lesson packages so that no new registrations will be available.
* The system shall allow drivers to add comments and notes for each lesson session.
* The system shall track lesson start and end times, duration, and driver comments.
* The system shall provide access to online classes and practice tests (for Package Three).
* The system shall record test information including test names, time taken, final score, and status (not taken, in progress, failed, passed, etc.) for each student.
* The system shall track who creates, modifies, or cancels any reservations, and record all changes for auditing purposes.
* The system shall allow administrators to print activity reports showing user actions.
* The system shall receive notifications and updates from the DMV regarding policy changes and new testing material.

### User Interface

* Web-based, cloud-hosted UI; accessible via any major web browser or via mobile devices.
* Users include Students, Drivers, Secretaries, and Administrators (separate privileges for IT officers and owner).
* Dashboard for students to view test progress (test name, time taken, score, status)
* Dashboard for lesson history including tables for lesson length, start/end time, and driver comments.
* Input forms for students and appointment information data entry (either by the student themselves, or via secretary inputting data on behalf of a user).
* Administrative interface for managing users, user roles, packages/modules, and reviewing activity logs/reports.
* “Contact Us” form and communication functionality between the business and students.
* Notifications for users regarding appointment confirmations, changes, DMV updates, etc.

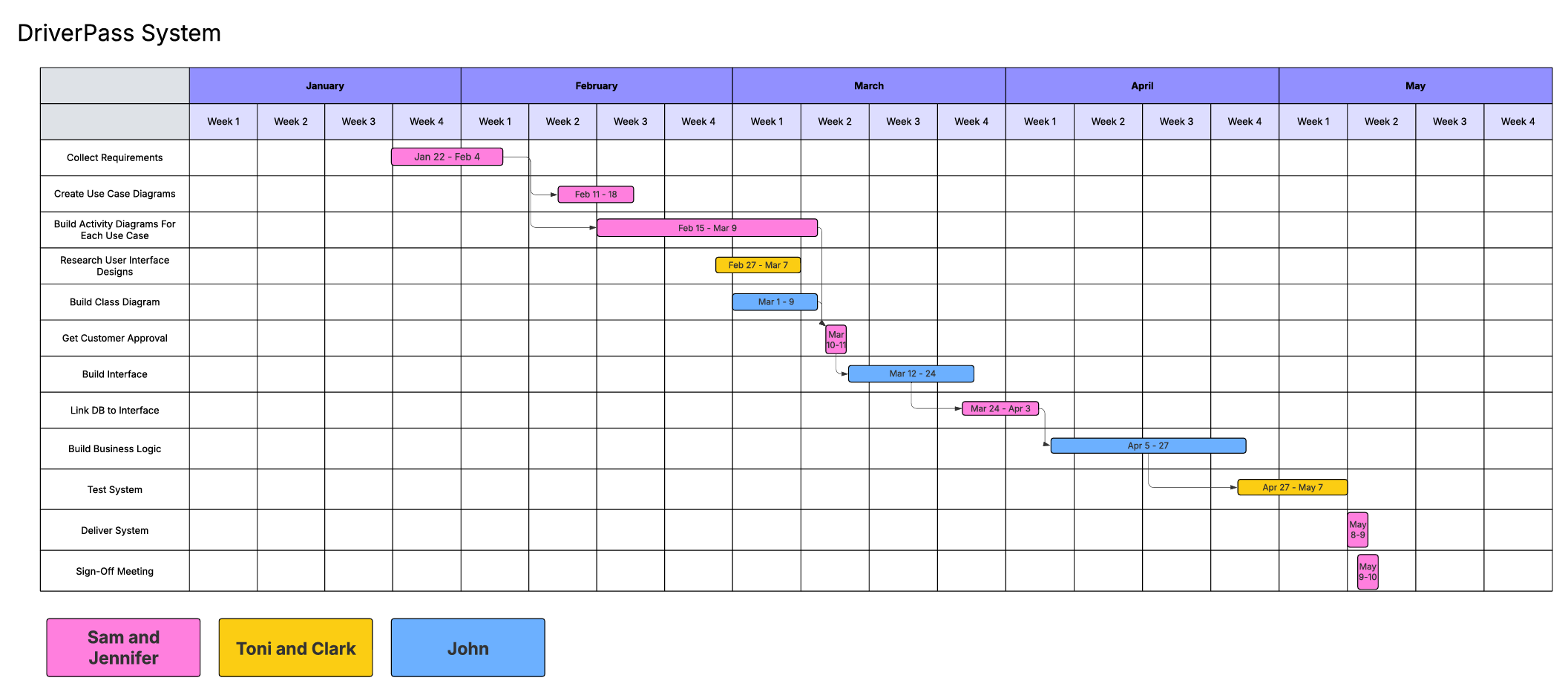
### Assumptions

* Users will have internet access for all features (besides viewing downloaded reports).
* Modification of data (appointments, driver notes, practice tests, etc.) requires an internet connection to prevent conflicts / duplication.
* Secretaries, drivers, and administrators have basic computer literacy and will be able to intuitively navigate the system interface.
* DMV provides regular updates in a compatible format, or that the system can be effectively notified of.

### Limitations

* System will not support fully offline data modification (offline access is view-only, except for downloaded copies of reports).
* Adding/removing modules and packets is nontrivial and will require developer intervention (postponed for future iterations of the system).
* DMV integration may be limited to what the DMV offers in terms of notifications/updates.
* Security and data backup functions are delegated to the cloud service provider; business will not have direct involvement in security and data backup.

### Gantt Chart

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