# Milton Francisco

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# CS 255 Business Requirements Document

## System Components and Design

### Purpose

* The purpose of this project is to provide a system that provides in-depth driver training through online courses and in-person instruction.
* The client, DriverPass, is looking to fill a void in the market by providing their services to those who require additional preparation for obtaining their driver’s license.
* Their system will allow users to take practice tests, schedule and log in-person driving lessons, and track progress online in an organized manner.

### System Background

* DriverPass identified a problem with the current driver training process, in that individuals do not receive enough training, leading to a failure in the driving or written exams.
* Individuals fail their driving tests due to inadequate preparation, and DriverPass aims to fill the gap by offering a flexible and efficient system for driver training and test preparation.
* DriverPass will offer a comprehensive driver training system that combines online classes, practice tests, and in-person driving lessons.
* This system will be structured, but flexible, and intends to improve the student driving test success rate.
* Overall, this system will allow users to study theory, practice in real life, and track their progress throughout their journey to obtaining their driver’s license.

### Objectives and Goals

**Goals**

* **Customer Self-Service:** Upon completion, the system should allow customers to register, schedule, modify or cancel their appointments.
* **Online Education:** Provide online practice tests and lessons with progress tracking.
* **Package Management:** Allow administrators to enable and disable training packages, with flexibility for future additions.
* **Access Control:** Have separate roles such as: Users – manage their appointments, Secretary – manage all user appointments, IT Officer & Owner – Full Access, i.e. manage users or information.
* **DMV Updates:** Provide update when DMV changes rules, policies, or sample questions, to ensure content is still relevant.
* **Reporting:** Generates reports for tracking activity, review of performance, or operational insights.

**Measurable Tasks**

* Design and implement user authentication and role-based access control.
* Develop main interface page that includes test progress tracking, user information, driver information and notes, special needs, as well as user and driver picture.
* Develop an interface to obtain and store user information securely.
* Develop an interface for use in contacting DriverPass.
* Integrate cloud-based data handling to ensure security and ease of access.
* Set up notification updates, to users with applicable roles, when DMV data changes.
* Build a reporting system for tracking reservations.
* Build a process for tracking test progress.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system needs to be a cloud-based web application.
* The system should load data and pages in no longer than two seconds.
* The system should be updated every month to include new DMV requirements.

#### Platform Constraints

* The system should be accessible on major operating systems, such as Windows and macOS for desktop, and iOS and Android for mobile.
* The backend requires a cloud-based database to store user information and progress.

#### Accuracy and Precision

* The system needs unique identifiers for each user to prevent conflicts when retrieving user data.
* Input should be case-sensitive to ensure precise user inputs.
* If an error occurs, an immediate notification should be sent to the admins in case of error or foreign activity.

#### Adaptability

* System should allow adding, removing, and modifying user roles without requiring code changes.
* The system should adapt seamlessly with cloud platform updates.
* IT administrators require full access to the system for maintenance.

#### Security

* For users to log in, the system requires a username and a secure password. The secure password must include the following: between 11 – 96 characters, an uppercase, a lowercase, a number, and a special character.
* Data exchange must have SSL encryption.
* Accounts will lock after 4 failed login attempts and will require password reset e-mail link to be sent to the e-mail on record.
* If a user forgets their password, they can manually request a password reset link be sent to their e-mail.

### Functional Requirements

* The system shall provide a way for users to register individually and gather personal data and payment information during registration.
* The system shall let users to manually book, modify, or cancel in-person driving lessons online.
* The system shall track and log all user progress while using the web app.
* The system shall provide administrators with tools to manage users and generate reports.
* The system shall integrate with the corresponding state’s DMV regulations to retrieve and updates as necessary.

### User Interface

* The customer needs the interface to book lessons, view practice tests, view progress and schedule and manage driving lessons.
* The secretary needs the interface to schedule and manage appointments, register new users, and manage customer information.
* The administrators need the interface to manage user roles, track website activity, and view and generate reports for the web app.
* The interface should expect access from mobile devices or web browsers.

### Assumptions

* All users will have continuous access to the internet with a compatible device.
* All users are using modern devices and updated browsers.

### Limitations

* The system will be limited because it will restrict customization of the interface as that is not a requirement from DriverPass.
* The system will be limited by budget constraints if some features are deemed to extensive.

### Gantt Chart

A screenshot of a computer

Description automatically generated