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CS-255

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# CS 255 Business Requirements Document

## System Components and Design

### Purpose

* Client: DriverPass
* This project should sell access to driving training and study material for tests.
* A website and database should enable customers to register for driving lessons and study material.
* Qualified staff should be able to register customers and download reports for their workflow.

### System Background

* Many people fail their driving test.
* DriverPass aims to provide training for DMV driving tests to reduce failures.
* Back-end system architecture should be cloud-hosted by 3rd party to focus on business rather than IT.
* The business has different roles, so roles in the system should reflect security and functionality.

### Objectives and Goals

* Customers can register for an appointment online or by phone.
* The website offers training packages that are modular and “toggle-able” on the admin side.
* The secretary may make/cancel/modify appointments.
* System Admins can download data reports.
* Appointments track the customer, driver, date/time, car, pickup/drop-off.
* Implement security and functional roles.
* Timestamped database manipulation logs.
* Password recovery process.
* Receive updates on DMV rules/policies/tests.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* Fast loading time on modern browsers
* Optimized database queries
* Good mobile browser loading time

#### Platform Constraints

* Runs on all modern browsers within Windows, MacOS, and Linux
* Database necessary for user management, vehicle tracking, and appointment scheduling

#### Accuracy and Precision

* 2 types of users: customers and admins
* User accounts created on the website
* Admin accounts created by another admin account in backend
* During registration, all user input should be sanitized
* Admins informed when appointments have conflicts such as instructor or vehicle double booked for the same 2hr block

#### 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?*

* Admin Roles with least privileges principle:
  + A root account with all access
  + A super admin level will all access similar to root for the manager
  + A level for secretaries who can schedule appointments for users
  + Secretary should be able to create, remove, and modify users
* System receives updates from the DMV on policy and test updates

#### Security

* Must utilize HTTPS protocol
* Employee accounts use “Least Privileges” to minimize access to what is necessary
* Multifactor Authentication for user login
* Admins can reset a user account
* User accounts have an automated password recovery process
* If a user account is found to be compromised it should be disabled and restricted access to the system

### Functional Requirements

* The system shall validate user credentials when logging in
* The system shall offer modular training packages
* The system shall make/cancel/modify appointments.
* The system shall create data reports.
* The system shall track the customer, driver, date/time, car, pickup/drop-off for appointments.
* The system shall have security and functional roles.
* The system shall timestamp system actions.
* The system shall have a password recovery process.
* The system shall receive updates on DMV rules/policies/tests.

### 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.)?*

* Desired Home Page:
  + Customer Information
  + Online test progress
  + Driver Notes
  + Special Needs
  + Driver Photo
  + Student Photo
* Additional Requirements:
  + Login/logout
  + Schedule appointment
  + Study material
* UI should be responsive and adapt to screen size whether desktop, laptop, tablet, or mobile
* Website is touch friendly

### Assumptions

* Users are on a common platform (windows, mac, linux)
* Mobile devices are smart devices with touch screen capability
* Backend system has 100% uptime
* Users have internet access

### Limitations

* Users must be connected to internet to use the service
* Staff must be connected to internet to use the administrative functions

### Gantt Chart

