# Liam Daley CS 255 Business Requirements

## System Components and Design

### Purpose

* DriverPass is a mid-size driver learning company with physical locations as well as an online presence, who wants to provide online classes and practice tests to users as well as in-person driving instruction.
* This system should be fully online accessible for both students and faculty, and include a comprehensive security suite.
* This system should contain useful administrative tools to streamline processes and prevent conflicts.
* This system should facilitate connections to outside services, connecting notification events to external changes or announcements.

### System Background

* DriverPass wishes to fill a perceived need for improved driver education, noting how many people fail their driving tests.
* This system will be composed of a database to store user records, an online front-end for data entry and client use, and a scheduling tool for the secretary.
* To fill the stated need, this system will allow clients and faculty to create appointments, handle scheduling, serve tests and assessments to online users, and facilitate communication between clients and instructors.

### Objectives and Goals

* Online administrative and record data access through computer and mobile platforms, including spreadsheet importing and exporting.
* Security administration granting different levels of records access to owners, faculty, and customers.
* Reservation database with tracking to preserve modification history and build activity reports, including reservation start time, end time, pick up address, and drop off location.
* Customer account database with first name, last name, address, phone number, state, credit card number, expiration date, and security code
* Customers can make, modify and cancel reservations through online system using account credentials or have a secretary enter the information into the same system. Password reset is available to customers who need it.
* Online system matches reservations to drivers and cars, presenting this information along with reserved time slot.
* Reservations fit one of three package levels, which can be disabled universally for purchase by administrator users.
* Customer can see online test progress through an interface, which is designed following provided UI plan. This information includes test name, time taken, score, and status.
* Online system also presents driver notes section, displaying lesson time, start and end hour, and notes the driver entered through the system themselves.
* Online system presents contact information for business and student to client and faculty respectively.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system shall be accessible through a Web browser.
* The system shall respond with minimal delay between request and response.
* The system shall present up-to-date data at time of retrieval.

#### Platform Constraints

* The system shall be accessible from Web browsers on all major operating platforms.
* The system shall run on a Linux server.
* The system shall include databases for user accounts, reservations and student records (including driver notes).

#### Accuracy and Precision

* Users shall be divided into administrators, staff, and customers based on account credentials.
* All input shall be case-sensitive, including customer records and student test results.
* The system shall automatically notify staff when it encounters a scheduling conflict.
* The system shall automatically notify administrators when it encounters any stopping error.

#### Adaptability

* Customers and staff shall be able to add/update customer data using forms and remove customer accounts upon request.
* Administrators shall be able to add/remove/update all user accounts.
* Administrators shall have system access to maintain and modify the system.

**Security**

* Users shall be prompted for a username and password to access the system.
* The connection between the client and server shall be encrypted.
* User accounts shall be automatically locked for a period of time if a number of incorrect password attempts are made sequentially.
* Administrators shall be capable of resetting user passwords to a randomly generated temporary password.

### Functional Requirements

* The system shall validate user credentials when logging in.
* The system shall allow administrators and staff to import and export data through common formats for offline work.
* The system shall preserve record edit history.
* The system shall present activity reports constructed from the reservation database.
* The system shall authorize customers and staff to make, modify and cancel reservations.
* The system shall validate reservation time slots for availability.
* The system shall automatically match reservations to drivers and cars.
* The system shall authorize administrators to disable and re-enable instruction package levels.
* The system shall prevent customers from purchasing disabled package levels.
* The system shall accept input from customers in the form of test results, and provide graded results in response.
* The system shall link to outside resources and identify staff when those resources report an update.

### User Interface

* The system shall present different views to different user types.
* The system shall present students with their test progress, driver notes and personal information.
* The system shall present students with instructor contact information.
* The system shall present multiple package levels to students.
* The system shall present students and staff with relevant reservation time slots and information.
* The system shall present instructors with student contact information.
* The system shall present administrators with system vitals and full database access.

### Assumptions

* It is assumed that users have access to the Internet.
* It is assumed that users have access to an Internet connected device updated to be contemporary to the past decade.
* It is assumed that the system is responsible for serving tests to customers and displaying results.
* It is assumed that package levels are disabled indefinitely, until being re-enabled.

### Limitations

* The system will not be accessible without an Internet connection.
* The system will not serve up-to-date data in all cases, it will be limited by fetch time and data transfer rates.
* The system will not support instantaneous loading of all records due to transfer rates.
* The system will only provide password reset at special administrative request.

### Gantt Chart

A graph with a green line

Description automatically generated