# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

* The purpose of the project is to create a user-friendly interface for setting appointments for driving tests and training.
* The client is DriverPass, who is looking to create driver testing services.
* DriverPass is wanting an interface to select a training package and set training appointments from a web-based application.
* There should be an ability for a user to add, update, or cancel their own appointments.
* Secretary should be able to add, update, or cancel any appointment in the system.
* There should be functional tracking to show who made changes to an appointment.
* The system needs to have security enabled with four levels of accessibility (Admin, IT officer, Secretary, and user)

### System Background

* DriverPass has noted a void in driver training for driver tests.
* DriverPass is wanting to start a web-based training service that would allow prospective drivers to study through online classes as well as take practice tests.
* In addition to these classes, DriverPass will also offer in-person driving practice with instructor feedback.
* Many prospective drivers fail their driver’s test at the D.M.V., leading DriverPass to believe that better training will help correct the problem.

### Objectives and Goals

* There should be a security protocol enabled with a login page.
* Each role should have specific abilities listed prior.
* The database should be accessible from any device by an admin that can then pull information to Excel files.
* Users should have a profile that keeps record of personal information securely.
* There should be three packages at launch based on how much training the driver needs.
* These packages should be able to be hidden if DriverPass wants to stop offering them to the users.
* Appointments should be able to be added, updated, and removed properly based on role privileges.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system will be a web-based application.
* The system will need to operate on mobile devices as well as desktop systems.
* The system should run quickly to provide information as fast as possible.
* The system should update when new information is passed (New appointments or new classes)

#### Platform Constraints

* The system should operate on Windows, Linux, Apple OS, and Android devices to cover the broadest range of users.
* The backend will require a database for appointment times and dates.
* The backend will also require a database for a user’s personal information.
* The backend will require a database to store login credentials for each user to enable security.

#### Accuracy and Precision

* Every user will have a personal username that they can set upon first login.
* Usernames and passwords are to be case sensitive.
* The system shall inform the admin of a problem if a user fails login 3 consecutive times. This would require an admin unlock and a password change.

#### Adaptability

* The code will be written such that an admin can add, remove, or modify users.
* Users will also be able to modify their own account information.
* The system should work properly with all platforms as updates arrive.
* The system may need updated as browser updates release, but in rare circumstances.
* The IT admin will need access to add, remove, and modify users as well as the ability to disable certain package offerings on the website.

#### Security

* Correct, case sensitive username and password will be required for user login.
* All data exchanged with the database will be encrypted using SHA-256 encryption to ensure safety from man in the middle attacks.
* Any brute force attempts for entry will meet a lockout upon the third incorrect credential set, resulting in an admin needing to unlock the account and requiring a password change.
* If a user forgets their password, they will have a link to reset it. This will send an e-mail with a verification code that will be verified and then a new password may be entered.

### Functional Requirements

* The system shall validate user credentials when logging in.
* The system shall lock a user’s account upon the third fail login.
* The system shall show the most up to date package offerings on the screen.
* The system shall allow users to add, modify, or remove appointments.
* The system shall allow admins to modify, add, or remove users.
* The system shall allow admins to disable packages that are no longer offered.
* The system shall allow admins to pull data from the appointment database into an excel file for offline reading.

### User Interface

* There will be four users, the basic user, the secretary, the IT officer, and the admin.
* The user will be able to interact with a calendar to make an appointment on an available time slot.
* The user will be able to edit and delete appointments that they have made.
* The secretary will be able to add, edit, or delete appointments from the database.
* The IT officer will be able to disable old packages as well as add, edit, and remove users.
* The admin will be able to see who has done what in the databases and when to monitor that the secretary and the IT officer are doing things properly.
* All use of the interface will be done through an internet browser. This allows use on mobile devices easily, which will be needed by the IT officer and the admin.

### Assumptions

* It is assumed that all required infrastructure is provided as far as servers and the like.
* It is assumed that the secretary and the IT officer will not act inappropriately.
* It is assumed that users will be familiar with basic web functions.
* It is assumed that the database will be maintained properly.

### Limitations

* There are limitations on the amount of data that can be transferred.
* There are limitations on internet latency based on geographic data.
* There will be limitations on changes to the packages, this will need to be done by a developer.
* There will be limitations on the number of suers that can be logged in due to load.
* There will be limitations on user’s accessing their account if they fail their credentials three times.
* There will be limitations in the adaptability of the system over time. Updates will need to be done by a developer.

### Gantt Chart

Timeline

Description automatically generated