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CS 255

SNHU

# Business Requirements Document

## System Components and Design

### Purpose

*What is the purpose of this project? Who is the client and what do they want their system to be able to do?*

* Company:
  + DriverPass
* Clients:
  + Liam - Owner
  + Ian – IT Officer
* Solve a need for better driver training prior to DMV testing.
* Customers can take online classes and practice tests.
* Company will also provide them with on-the-road training if they wish.
* Customers can schedule appointments.
* Cars and Drivers can be assigned to appointments.

### System Background

*What does DriverPass want the system to do? What is the problem they want to fix? What are the different components needed for this system?*

* Cloud Based System.
* 3rd party storage and security.
* Access DMV Compliance notices.
* Database creation and storage.

### Objectives and Goals

*What should this system be able to do when it is completed? What measurable tasks need to be included in the system design to achieve this?*

* Client specified interface:
  + Online Test Progress:
    - Test Name
    - Time Taken
    - Score
    - Status
  + Information:
    - Name
    - Address
    - Phone
    - Etc.
  + Driver Notes:
    - Lesson Time
    - Start Hour
    - End Hour
    - Driver Comments
  + Special Needs
  + Driver’s Photo
  + Student’s Photo
* Student Contact page.
* Contact Us page.
* Varied access levels (Customer, Secretary, IT, Owner).
* Customer Registration (first name, last name, address, phone number, state,

credit card number, expiration date, and security code)

* + By phone
  + Online
* Customer Account Sign in:
  + Automated password reset options.
* Scheduled appointments:
  + Time/Day - 2 hours each
  + Driver
  + Vehicle
  + Pickup/Dropoff Location
* Printable activity report:
  + Reservations
  + Cancellations
  + Modifications
* Initial Packages:
  + Package One: Six hours in a car with a trainer.
  + Package Two: Eight hours in a car with a trainer and an in-person lesson where we explain the DMV rules and policies.
  + Package Three: Twelve hours in a car with a trainer, an in-person lesson where we explain the DMV rules and policies—plus access to our online class with all the content and material. The online class also includes practice tests.
* Access data online from any computer or mobile device.
* Downloadable reports and information that can be worked on offline.
* Ability to disable an offered package.
* Remain in compliance with the DMV.
* Future addition of packages and updates to existing packages may be needed.
* Expected time frame to deliver the project for the client. (Start to finish)

## Requirements

### Nonfunctional Requirements

*In this section, you will detail the different nonfunctional requirements for the DriverPass system. You will need to think about the different things that the system needs to function properly.*

#### Performance Requirements

*What environments (web-based, application, etc.) does this system need to run in? How fast should the system run? How often should the system be updated?*

* The system must be web-based.
* The system must have quick response times to user interactions, both online and when taking tests.
* The system must be able to handle multiple users at one time without significant performance loss.
* The system must be able to receive frequent updates to correct bugs and keep security features supported.
* The system must remain updated with the current requirements for compliance with the DMV.
* Enabling and disabling specific package options will need to be done by DriverPass users as needed.

#### Platform Constraints

*What platforms (Windows, Unix, etc.) should the system run on? Does the back end require any tools, such as a database, to support this application?*

* The system must be accessible to common platforms like Windows and MacOS, as well as mobile device platforms like Android and iOS.
* The functionality and interface controls need to be considered for each platform it is available for. Each one will interact with the website in different ways.
* The system must maintain databases for user accounts, vehicles, instructors, and scheduling.

#### Accuracy and Precision

*How will you distinguish between different users?* *Is the input case-sensitive? When should the system inform the admin of a problem?*

* Users will need their own personal account accessed through log in credentials.
* Passwords will need to be case sensitive to increase the security of the account for the users.
* The admin should be alerted if attempted access is determined by the system to be unauthorized through repeatedly incorrect credentials.

#### 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?*

* Adding, removing, and modifying users must be an included feature of the system.
* Platform updates should be handled through continued system support.
* IT admins will need access to each of the internal functions, including adding, removing, and modifying user accounts as well as modifying the packages offered to the customer through the website.

#### Security

*What is required for the user to log in? How can you secure the connection or the data exchange between the client and the server? What should happen to the account if there is a “brute force” hacking attempt? What happens if the user forgets their password?*

* A user will need to have created an account using an email address and a password.
* The user’s password should be required to use a combination of upper and lowercase letters as well as at least one non-alphanumerical character.
* Encryption can be used to help secure the connection or data exchange between the client and the server.
* In the case of a “brute force” hacking attempt after a set number of incorrect attempts the admin should be notified and the account should no longer be able to be accessed for a set period of time.
* A user who has forgotten their password should be able to select an option to reset their password. The email attached to their account should receive the required access to reset the password.

### Functional Requirements

*Using the information from the scenario, think about the different functions the system needs to provide. Each of your bullets should start with “The system shall . . .” For example, one functional requirement might be, “The system shall validate user credentials when logging in.”*

* The system shall validate the credentials of the user logging in.
* The system shall display appropriate options for the account type. (Customer, Reception, Admin)
* The system shall allow customers to select packages, schedule practices and tests, and make modifications to their account information.
* The system shall display all available packages to all users.
* The system shall allow Admin users to edit existing packages availability.
* The system shall display exam scores and exam progress.
* The system shall allow individual instructors to be assigned to individual cars.
* The system shall allow Reception users to schedule practices and tests on behalf of the customer.
* The system shall remain up to date with compliance per the local DMV.

### 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.)?*

* Customer/Reception/Admin:
  + Account Sign in
  + Automated password reset options.
  + Online Test Progress:
    - Test Name
    - Time Taken
    - Score
    - Status
  + Information:
    - Name
    - Address
    - Phone
    - Etc.
  + Driver Notes:
    - Lesson Time
    - Start Hour
    - End Hour
    - Driver Comments
  + Currently Offered Packages
  + Special Needs
  + Driver’s Photo
  + Student’s Photo
  + Student Contact page.
  + Contact Us page.
* Customer:
  + Customer Registration (first name, last name, address, phone number, state,

credit card number, expiration date, and security code)

* Schedule an appointment online
* Reception/Admin:
  + Scheduled appointments:
    - Time/Day - 2 hours each
    - Driver
    - Vehicle
    - Pickup/Dropoff Location
  + Printable activity report:
    - Reservations
  + Cancellations
  + Modifications
  + Edit Customer Visibility to Individual Packages Offered

### Assumptions

*What things were not specifically addressed in your design above? What assumptions are you making in your design about the users or the technology they have?*

* It is assumed that this business will continue to grow and will need further functionality added to their system in the future.
* It is assumed that DriverPass has IT support that is trained to offer continued support to the system.
* It is assumed that customers will have access to the internet and the ability to reliably interact with the system.

### Limitations

*Any system you build will naturally have limitations. What limitations do you see in your system design? What limitations do you have as far as resources, time, budget, or technology?*

* The system will require a trained programmer to add or make changes to interface design or the offered packages.
* The system requires an internet connection to access.
* The time constraints and budget of DriverPass determine the degree of functionality the system can include.

### Gantt Chart

A screenshot of a computer

Description automatically generated