**Project 1**

Josiah J. MacArthur

Department of Information Technology, Southern New Hampshire University

CS-255: System Analysis and Design

Professor Federico Bermudez

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# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

* This project is for our client, DriverPass, which seeks to implement a system that contains online classes and practice tests to help automobile drivers pass the DMV test. In addition, those involved in the test-taking can opt for on-the-road tests if they desire.

### System Background

* The system is to allow for online class, practice tests, and supplemental on-the-road tests
* The problem that is to be fixed is a current lack of effective driver training. The system will give different avenues to help drivers prepare for the DMV test.
* The components needed are online and offline accessibility for the owner, security for user account data, tracking for appointments and cancellations, as well as user functionality to make appointments, cancel, or modify them. Allow for client to eliminate certain items/packages if deemed necessary.
* Administrator privileges for controlling different accounts and accessibility.
* A secretary account that allows for user to make appointments with walk-ins or by phone.
* Note-taking log for drivers giving students lessons.

### Objectives and Goals

* The system will provide the user with the following functions:

o Allow users to make reservations and set schedule in person, phone, or online for driving lessons

o Allow for three different package choices, each containing differing levels of training

o Provide online classes for DMV test training

o Provide practice tests to test accumulated knowledge from classes

o Track user statuses

o Track drivers and cars used for driving lessons

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* System must be web-based for all users, presumably cloud-based.
* System must be accessible by owner from a mobile phone.
* System needs to be fast enough to handle all traffic at once, such as reservation setting/canceling, account changes, multiple users online at once, changes across multiple user accounts being made concurrently.
* The system should be updated on a regular basis, with some software being updated at least once a month, if not weekly.

#### Platform Constraints

* The system should run on Windows as it is more user-friendly for businesses
* A database is required for this application as it will store user information, transactions, packages/modules, and other data. Databases are available within cloud computing.

#### Accuracy and Precision

* Users that work for the company will be assigned a username and they will create a password. The username will not be case sensitive, but the password will be.
* Customers will have the ability to create an account with a username (not case sensitive) and password (case sensitive). They will provide their information that will be attached to the account, such as address, phone number, DOB, etc.
* The admin will be informed of a problem if a user makes too many unsuccessful attempts to login to their account. This could be a sign of a potential security breach.
* When an employee is terminated, the admin should be reminded to lock this employees account so they cannot have access to the system.

#### Adaptability

* The adding, removing, and modifying of a user will be possible without needing to change the code.
* Users will be able to change passwords and modify their information from their account.
* In order to mitigate potential issues, platform updates will be performed during obscure hours (such as 12AM – 3AM). This is to ensure continued traffic flow during normal hours. A message indicating platform updates will be shown on the website well in advance prior to maintenance.
* The IT admin will need access to the system for maintenance and any modifications necessary

#### Security

* A username and password will be needed to login. A two-step authentication process can be implemented, such as a code sent through email or text, in addition to username and password.
* The connection will be secured through data encryption – this security measure should be handled by cloud software
* Any account that is unsuccessfully logged into after 3 attempts should be locked until an admin approves unlocking
* If the user forgets their password, they can click a link to create a new one. They will be prompted to answer security questions and the password link will be sent to their email to set up a new one.

### Functional Requirements

* The system shall validate user credentials when logging in.
* The system shall create an appointment or reservation when the user chooses this action.
* The system shall receive notifications whenever the DMV has updated rules, policies, or sample questions.
* The system shall allow the user to change their password.
* The system shall generate different package deals for the user to choose from.
* The system shall match a driver with a customer.
* The system shall track these matches, the times, and the vehicle used.
* The system shall cancel or modify a reservation when needed.
* The system shall generate online classes and practice tests for customers.

### User Interface

* The system will need to run off the web, preferably over the cloud.
* The users will include the business owner, the lead IT officer, the receptionist, and the customer.
* The business owner will need comprehensive access to reports, financials, appointments, and modules. The IT officer will need access to the backend – he will be responsible for maintaining and/or modifying the system. The receptionist will need to be able to add notes and make appointments for customers. Finally, the user will be able to make appointments, cancel, and modify appointments.
* The users will primarily interact with the interface through a web browser (desktop, laptop, or phone).

### Assumptions

* I am assuming that the user will have a device that is capable of accessing the interface and have it work correctly.
* I am assuming that the user will have the necessary software to utilize the system.
* I am assuming that Windows will be sufficient for the needs laid out by the business owner.

### Limitations

* Based on what the owner desires, we may run into budgetary constraints.
* The more details that are added to the software, the more time will be required to design it. Therefore, time is factor.
* There may be a need for more developers if the system requires more details or upscaling

### Gantt Chart

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