# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

* DriverPass would like to create a system that offers online classes and practice tests to students preparing for the driving test at the department of motor vehicles (DMV). Many students fail their driving test; this system seeks to better train students to pass by offering these resources along with on the road training.

### System Background

* They have no existing information system, so this system will be built from scratch.
* The system should be cloud based, requiring little technical expertise on the part of the owner.
* Students may schedule 2-hour driving sessions through the system or by calling the receptionist.
* Students may book one of three 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.

### Objectives and Goals

* The objective is to design a system that helps students pass the DMV test by offering online tests and a way to schedule driving lessons.
* The goals of the system are:
  + To create a learning management system that offers practice tests that are updated according to the DMV website.
  + To create a functioning reservation system.
  + To be secure by implementing user roles with password authentication.
  + To allow data to be downloaded and worked on offline using excel.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system shall be cloud based.
* The system will need to run in browser and on mobile.
* The system must be updated whenever the DMV updates their testing requirements.

#### Platform Constraints

* The platform will be Windows based, but will be portable to mobile devices and apple OS.
* The system will need several databases to store:
  + Student information and test progress
  + User activity history
  + Reservation information
  + A back-up log

#### Accuracy and Precision

* Different users will have a unique ID associated with their account, along with their role level.
* In the case of a problem, the admin and IT officer will be notified by email.
* The input does not need to be case-sensitive.
* Data that is changed offline and then uploaded must be validated to ensure there is no redundancy. The previous data will be stored in a back-up log. This can be recovered in the event of an error.
* The system will validate any reservation based on driver and car availability.

#### Adaptability

* The admin and IT roles will have access to a page that allows for easy editing of current users. They will be able to add/remove users, as well as edit their personal information.
* The admin, IT, and secretary roles will have access to a page that allows them to edit the reservations. They will be able to remove/add reservations and change the student, driver, or car.
* The administrator will be able to a disable package so that no one else can register for that package.
* The system will notify the admin and IT officer when a change has been made to the DMV website. The IT officer may then take the system offline to apply the changes.

#### Security

* The system will require a user email and password to log in.
* There will be five user roles: administrator, student, secretary, information technology officer, and driver.
* The student user role is assigned to a new account by default.
* The administrator role can promote an account to a different role.
* A user can reset their password by following a link on the login page. The link prompts the user for their email, then if it matches a user account, an email is sent to that address that allows the user to change their password.
* The password must contain an uppercase letter, a number, and be at least 6 characters long.
* A user may attempt to log in 5 times before their account is frozen and they must reset their password to log in.
* Payment information must be encrypted.

### Functional Requirements

* The system shall allow the administrator to download data about students and reservations in an excel format.
* The system will offer a way to schedule two hour driving lessons.
* The system will allow access to three different driving 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.
* The system will divide the total hours offered by the package into two-hour increments to be assigned to different days.
* The system shall track the activity of each user and store this information.
* The system shall allow the creation of a new user account.
* The system shall prompt and store student information.
  + First name
  + Last name
  + Adress
  + Phone number
  + State
  + Credit card number
  + Credit card security code
  + Pick-up location
  + Drop-off location
* The system shall provide a customer support form that sends an alert email to the secretary when a new form is submitted.
* The system shall allow students to take practice tests.
* The system shall record the outcome of the tests.

### User Interface

* The interface shall be accessible from browsers or mobile devices.
* The interface will vary according to the role of the user.
* The student role will have a page with their personal information, their picture, a picture of their assigned driver, their picture, their online test progress, any driver notes, their upcoming training schedule, and any special needs. They will also have access to the reservation system and a page allowing them to contact support.
  + Test progress should show the time taken and its status. The status can be passed, failed, or not taken.
  + Driver’s notes should show a table including lesson start time, lesson end time, and driver notes.
* The secretary role, IT officer, and administrator will have a page to enter in a student’s information or to edit an existing student. They will have access to the reservation system, as well as a page to edit reservations, and a page to respond to customer support inquiries.
* The IT officer and administrator will be able to take the system offline in order to update it through a maintenance page. This page should also host a tool that checks for updates on the DMV website.
* The customer support form should check to see if a user is logged in. If it is, it should important their information and prompt them to explain their concern. If they are not logged in, the form should prompt the user for their name, email address, and concern.
* The DriverPass logo should be displayed at the top of each page.

### Assumptions

* We’re assuming the cloud service will take care of security and maintenance of the server.

### Limitations

* Due to time constraints, the ability to add or remove modules will be left for future releases.

### Gantt Chart

This screenshot shows week 1 of the Gantt chart. The full chart must be accessed in excel. I’ve made 4 Gantt charts using 4 separate tools, with none of them including all of the functionality requested in the feedback. They were all lacking for one reason or another, partly because they’re not designed to be screenshotted, but rather linked to team members, who can then access all the features of the chart.

