# CS 255 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?*

* DriverPass is hoping to take advantage of a void in the market when it comes to training students for the driving test at their local department of motor vehicles. Many people fail their driving test at the DMV thus DriverPass aims to help customers prepare for the test through online classes and practices test within person on-the-road training available as well.

### 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?*

* The system should be accessible from anywhere both online and offline, including mobile and desktop. The system must have security features to allow for the allocation of different roles and access. Customers need to be able to make reservations for driving lessons. Each lesson is for two hours, and the customer should have the ability to determine the day and time these lessons take place. They should be able to make reservations online using their account or they can call or visit the office to schedule an appointment.

### 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?*

* The system needs to run off the web over the cloud. They do not want to deal with backup and security. The online test progress should show the tests the customer took. It should show what’s in progress and the ones that the customer completed. So, it would say something like test name, time taken, score, and status. The status can be not taken, in progress, failed, or passed. There should be a section for driving notes where the admin can see any comment left by the driver as well as timestamps for the lesson. There should be an input form where the student (or secretary) fills in the student information, such as first name, last name, address, et cetera. There also should be a contact page, and a way to contact the students. There are 10 cars each assigned by a driver and the customer can pick 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.

## Requirements

### Nonfunctional Requirements

#### 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 is required to run on all available platforms including Desktop, Mobile and Web. The system should be optimized to run on lower end machines. They system should be maintained and updated regularly to address any potential bugs or leaks in the system.

#### 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?*

* For Mobile the system should run on Android and Apple systems. Desktop platforms to target are Windows, Linux, and Mac. The system does require a cloud database and API in order to support multiplatform applications.

#### 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?*

* Each user will have a unique account ID and forms will be case-sensitive, when necessary, like filling out a password. There should be both automatic detection of problems such as payment and other but there should also be a place for people to manually submit bug reports to admins.

#### 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?*

* The system will have the ability for accounts to change certain attributes given their privilege level without the need to manually change such things through code. There will be set times in which services will be temporarily unavailable for system maintenance and updates. The IT administrator should have full administrative access to the system in order to manage it properly.

#### 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?*

* The user will need the email and password they used to create the account, and all data will be encrypted for privacy. If there is an account found to be accessed through brute force attacks the account will be locked until it can be reclaimed by admins verified by the owner on record. There will be systems in place to allow users to reset their password if they forget.

### 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 generate reports for offline work.
* The system shall validate user credentials when logging in.
* The system shall show student test progress
* The system shall show in-progress and complete tests.
* The system shall track driver customer pairs.
* The system shall track timestamps and cars.
* The system shall disable packages when no slots are left for the given package.
* The system shall allow for registration online.
* The system shall have a automatic password reset system.
* The system shall track employee action
* The system shall allow for online reservations
* The system shall allow drivers to leave notes after lessons

### 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.)?*

* For the general user they should see a space displaying all of the following: online test progress, all of their personal information on file, drivers note, special needs, driver photo and student photo. The administrators should see a table of all users and actions that can be considered. There will be touch and mouse capabilities for interacting with the UI based on what platform the user is visiting from.

### 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?*

* We are assuming that they have access to the internet and a valid device in order to use our application. We are assuming that the end user has some base level of internet literacy to be able to navigate our UI without explicitly walking them through it.

### 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?*

* A limitation in the design of the system is that it relights heavily on information provided by the DMV so any hitches in the pipeline from the DMV will cause issues and hindrances to customers needing relevant information on driving rules and procedures.

### Gantt ChartGantt Chart of the Schedule Presented in the Driver Pass Interview