# CS 255 - DriverPass 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?*

* The company, DriverPass, would like to have a system developed that will help students to learn about driving, by providing online/practice tests.
* System should allow for scheduling of on-the-road tests.
* Additionally, DriverPass would like the profiles to be available online or offline.

### 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?*

* DriverPass would like the system to display scheduling, and current scheduled times/drivers.
* DriverPass would like the system to allow for easier delivery of new DMV information as it becomes available. (New rules/policies/sample questions)
* DriverPass, preferably, NEEDS TO RUN OFF THE CLOUD.
* Hardware Components needed:
  + Computer/Mobile device WITH INTERNET CONNECTIVITY.
  + Up-to-Date Photo.
  + Payment Method - Credit/Debit.
* Software Components needed:
  + Login/Logout.
  + Password Reset Method.
  + Payment Method.
  + Database (for handling of roles/information)
  + Online Tests (with test name/time taken/score/status – (not taken/in progress/failed/passed))
  + Driver Notes (Lesson Time – Start Hour – End Hour – Driver Comments)
  + Input form for student information.
  + Page for contacting anyone above user role, as well as way for anyone above user role to look up user contact information.

### 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?*

* Allow users (or secretaries) to make profiles. Users should be able to choose which package they would like to purchase. (Described at bottom of this block)
* Tiered Accounts:
  + Administrator
  + Information Technology Officer
  + Secretaries
  + Drivers
  + Users
* Administrator Role should have the ability to add/edit/delete all accounts, as well as having the ability to see who changed what information and what time the information was changed. Ability to print out report that shows all statistics, as to point out what changed and when.
* Information Technology Officer roles should have everything that the administrator role has, EXCEPT the ability to edit the Administrator roles or other roles of their tier.
* Secretary roles should have the ability to set appointments, edit information on user accounts, and create user accounts.
* Drivers should be able to have their own accounts so that the Users feel more comfortable with their driver.
* Drivers should be able to see all their current students with current appointment times and be able to provide notes on users.
* Users should be able to reserve time slots with their specified driver. (Provide a link to call the office. This is for users that would rather have someone else set their account up and set their appointments.)
* Users should have access to the online/practice tests.
* Users should be able to see what their driver looks like, as well as the driver see what their student looks like.
* Users should be able to cancel, confirm, or edit their reservations.
* 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

*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?*

* Client wants web based.
* System should be very responsive.
* Client wants the system to be refreshed as new information becomes available.

#### 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 will require a database.
* Should be accessible by anything with a web-browser. (Windows, Linux, Mac, e.g.)

#### 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?*

* Precision should be at maximum level. The more detailed the better.
* Input is CASE-SENSITIVE.
* Each User will be identified by their unique identifier, which will be given to them upon account creation.

#### 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 web-based application can be programmed in the PHP language. This allows direct access to and from the database with zero changes to the code.
* The IT-Administrator will have access to the ability to manually update the Database.
* IT-Administrator will have access to performing platform updates.
* IT-Administrator WILL BE NOTIFIED IF updates are available.

#### 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?*

* Limit number of attempts to log in, and IF log in fails more than specified amount, force a password change. Two Factor Authentication will be encouraged.
* Secure Socket Layer Technology will be issued to the website, and it will secure the connection.
* Reset Password Link

### 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 user credentials when logging in.
* The system shall stop brute force attacks.
* The system shall be secured through SSL.
* The system shall update automatically from various data sources and will update users of new information.
* The system shall create/update/delete users as needed.
* The system shall allow password change requests.
* The system shall have a database that can and will be updated by all user roles. (Not all roles can directly manipulate the database.)
* The system shall allow for scheduling tests/driving tests.
* The system shall have a way to directly contact the office.
* The system shall have a means of processing card transactions.

### 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.)?*

* The user will interact with the system through any browser available to them.
* User will have to provide:
  + First Name
  + Last Name
  + Address
  + City
  + State
  + Zip Code
  + Phone Number
  + Email Address
  + Optional Special Needs
  + Updated Identification Photo
* Driver should be able to give notes to the students through the User Interface.
* UI should show driver and student their current special needs.
* UI should show a photo of the Driver and the Student.
* UI should show Online Test Progress.
* UI should have the DriverPass Company Logo at the top.
* Current settings of UI should be downloadable so that it is accessible offline as well.

### 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?*

* User should have access to computer/cell phone/Tablet/landline phone
* User should have internet access for computer/cell phone/tablet
* User should have a credit card.

### 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?*

* Budget will be limited.
* Time will be determined, Meticulous design choices.
* Technology will have to be limited so that it is accessible by those with older configurations.
* Modular Build makes it impossible to make it so that it is easy for anyone to build upon the current build.

### Gantt Chart

*Chart

Description automatically generated*