# Miterrand Reyes: DrivePass - 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 aims to build a student-centered system. According to their research, students who are looking to obtain a driver's license often fail. Primarily, the failures are driven by the lack of resources and real-world experience. DriverPass is committed to providing both of these for its customer base. A one-stop shop for both online practice testing and real-world on-the-road training, DriverPass aims to be the system to fulfill these needs.

### 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 has asked us to develop a system that provides students seeking to obtain their driver's licenses with both online practice exams and on-the-road training.
* The systems will be called DriverPass and will provide student services for driver’s license purposes.
* DriverPass will be a web-based system accessible to students.

### 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?*

* Provide online driver’s license practice tests.
* Schedule on-the-road driving practice time slots with trainers.
* Driving license information will be updated accordingly with the current DMV updates.
* Different authorized roles (users, schedulers, admins).
* Supports flexible student-offered package management.

## 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?*

* DriverPass must be able to run on the web, preferably over the cloud.
* Reservations must be able to be made from the system by the user and company schedulers.
* System data should be accessible to the owner from both online and offline locations.
* System online testing should update alongside the current DMV standards.

#### 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?*

* DriverPass should be compatible with Windows, macOS, and mobile platforms, including Android and iOS.
* The system should have a reliable database that stores user information.
* Security and backups need to be handled by the cloud host.

#### 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?*

* Authorized roles must be clearly defined between students, secretaries, administrators, and IT.
* Input validation must be included for student logins and payment inputs
* The system must not take updates to information when it’s being worked offline to prevent data duplication

#### 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?*

* Administrators should be able to enable or disable packages without code changes.
* Admins should be able to fully access customer and employee accounts to reset passwords or take away permissions from employees who have been let go.
* Future module additions must cause minimal disruptions to the system.

#### 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?*

* Customers must log in with a username and password
* Use of an OAuth server for logging in is best practice
* Critical credit card info must be encrypted.
* Forgotten credentials must be smoothly handled by password reset functionality.

### 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 provide customers with up-to-date DMV information online testing.
* The system shall provide customers with on-the-road scheduled trainings.
* The system shall allow both customers and secretaries to create appointments for the on-the-road tests.
* The system shall track and log all actions for online and offline analysis.
* The system shall track which user is matched up with specific drivers, time slot, and car when a road test is scheduled.
* The system shall allow admins to enable/disable packages.
* The system shall update online tests with current DMV updates.

### 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.)?*

* User Interface
  + Dashboard with online testing progress
  + Driver information section, which contains first and last name, address, city, state, etc.
  + Driver notes/lesson times section for the on-the-road lessons
  + Special needs information section
  + Driver photo box
  + Student photo box
  + A contact page so students can reach out to system support or DriverPass staff
* Different Users
  + Customer – Create a DriverPass account, handle their own scheduling for on-the-road testing, and access online practice tests.
  + DriverPass employees – Input customer data, handle customer scheduling.
  + IT – Full system access for account handling and maintenance of the system.
  + Admin – Full system access, account resets for customers, account termination for let go employees, able to review system activity, work with system data offline and online.

### 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?*

* Customers will have internet access.
* DriverPass employees will be trained to use the new system
* Cloud hosting will handle backups and security, so internal IT doesn’t need to.

### 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?*

* Customer package design that requires additional development to accommodate new packages. This is not an admin function, which will be included in the initial release.
* No data modification when working offline to prevent data duplication.
* Real-time DMV API integration to be up to date with current standards.
* The user interface is based on the owner's sketch, which might limit more modern design options.

### Gantt Chart

*Please include a screenshot of the GANTT chart that you created with Lucidchart. Be sure to check that it meets the plan described by the characters in the interview.*

A diagram with multiple colored squares

AI-generated content may be incorrect.