# 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?*

* The client for this project is *DriverPass*, a new company that is focused on helping people learn how to drive by creating online classes, practice tests, as well as on-the-road training.
* They want a new system designed to make it easier for them to access records, schedule appointments, modify tests/exams, and be accessible from the cloud, meaning that any device with a Wi-Fi/internet connection should be able to access it.

### 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* believes that there should be more resources out there to help train new drivers, so they created a company that offers resources such as online classes, practice exams, and even on-the-road training to help them pass the real DMV test.
* The system needs to be over the cloud, meaning that it should be easily accessible to users and *DriverPass* employees from any device with an Wi-Fi/internet connection, and the website should also be easy to use for people of all ages.

### 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?*

* First, employees, as well as customers, should be able to make reservations, buy packages based on what services they would like, and it should also allow employees to modify and change data whenever it’s needed.
* Specifically on the user side, people should be able to make reservations for certain dates at certain times, and drivers and cars will be assigned to that user. That information should be easily accessible in the system, with employees being able to access records such as which driver has which car, and which customer is with which driver, etc. Users should also be able to reset their passwords by themselves, in case they forget theirs.
* The boss should also have permission in the system to access all records of any kind and be able to block/delete certain users if need be. The boss should also be able to disable certain packages if they don’t want any more customers registering for it.

## 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?*

* The system should be built over the cloud, meaning that it can be accessed anywhere with an internet connection. Since it will be a web-based application, the system’s performance will mostly depend on the user’s device and internet speed. Nonetheless, it should be able to handle thousands of users at once without sacrificing significant performance.

#### 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 should run on any device through an internet browser and will require databases on the back end for things like reservations, previous appointments, transaction history, etc.

#### 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?*

* There will be 4 different types of users within the system, the boss, the IT officer, the secretary, and the customers.
* The boss and the IT officer will have complete control of the system and will be able to modify it however they choose.
* The secretary will only be able to make, modify, or cancel reservations.
* Lastly, the customers should be able to make, modify, cancel reservations, and also access their tests, driving history, and account information.
* The boss and IT officer should also be notified if any records are changed throughout the system.

#### 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 boss and IT officer should have the ability to modify users when needed and launch updates when needed in order to maintain 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?*

* Each user will have a username and password required to log into the system.
* If a customer forgets their password, there should be an option for them to reset it themselves, and if a staff member forgets their password, the boss will be able to reset theirs.
* All of the backup and security details will be handled by the development team, so that DriverPass can focus on running the business.

### 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 authenticate users account information when logging in.
* The system shall let users reset their passwords on their own.
* The system shall let the boss and IT admin have full control over all data within the system.
* The system shall let the secretary and customers schedule, modify, and cancel reservations when needed.
* The system shall also provide reports of where drivers are, and which customer they are driving with at all times.
* The system shall notify DriverPass of any changes made regarding DMV rules and regulations.

### 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.)?*

* From a customer's standpoint, the system’s interface should allow customers to register an account, log in, access their testing progress, access their driving history, access a special needs section, and also display a photo of the student and their driver.
* For the secretary, the system should only allow them to create, modify, and cancel reservations.
* For the boss and IT admin, they should have full control over the system and should be able to modify any data when needed.
* The system will be available on any device, but will have different versions depending on what type of device the user is on. For example, the system will look different depending on if you’re using a mobile device or a computer.

### 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?*

* It’s safe to assume that all users have access to the internet and have a device capable of running the website.
* It’s safe to assume that DriverPass wants their website to run as fast and as smoothly as possible.
* It’s safe to assume that the IT admin can handle issues that may arise later on down the line regarding system updates and maintenance.

### 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?*

* DriverPass mentioned wanting the system to be flexible, specifically with modifying the packages, but it can’t be done at this time, but it might be possible with a future release.
* Depending on the amount of people using the website at any given time, the system might face decreased performance or crashing.

### 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 graph with multiple colored squares

Description automatically generated with medium confidence*