# CS 255 Business Requirements Document Template

## 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 looking to get ahead of the market by providing a new type of system.
* The new system must be able to assist student drivers in their driving test at the DMV using classes, practice tests, and on-the-road tests.

### 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 must provide online classes, practice tests, and a scheduling source for on-the-road training to help student drivers with their real tests at the DMV.
* It must be web-based (stored via the cloud) so it can be accessed from any computer.
* The system must be able to have downloadable reports so the client can work from home (in an Excel spreadsheet form).
* Security must have 3 levels of role-based access. An administrator (client and IT officer, an assistant(secretary), and a user(student).
* Any changes to the system must provide tracking reports.
* Student drivers shall be able to create reservations for on-the-road training via their accounts or by calling the secretary.
* When registering for services the student driver will be prompted to call the client to provide all needed information to the secretary.
* An automatic password reset system will be in place for student drivers.
* Client must be notified whenever DMV updates anything.
* Visual of the webpage should follow the client’s example sketch.
* An input form must be used for and by student drivers or the secretary to input information about the student driver into their account.

### 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 shall be able to help train people learning to drive to pass their tests at the DMV. This will be done via classes, practice tests, and reservations for on-the-road training. The system will allow a student to create and modify their own account when needed and will provide a prompt to call the company to provide the necessary information to sign up for 1 of 3 packages provided by DriverPass.
* The system shall be accessible via the web wherever the internet is accessible. It will be accessible on both computers and mobile devices. It will have downloadable reports based on the authorization of the individual to be able to work offline.
* The system shall have all data stored in cloud storage. There will be 3 levels of authorization for security measures. Open access to everything for the owner and IT officer, limited access for the secretary, and individual account access to student users. At the owner level of access, there should be tracking on any changes made to the system and by whom made the change. It will have an automatic password reset for users.

## 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 will be web-based and will need to perform in multiple browsers.
* Speed of the system was not specified but will need to be fast enough to accommodate any user’s setup.
* The system must be updated every time the DMV updates as well as if a module must be added or taken down. The DriverPass will have an option to temporarily disable a reservation package if needed.

#### 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?*

* Linux will be the main platform used for the back-end development of the system.
* A database must be created and stored in cloud storage to hold all profile information.

#### 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?*

* Roles must be assigned so that log-in will be able to display proper data. There should be a specified admin log-in as well as a log-in for the secretary. Student profiles are creatable with their own unique and personal username and password.
* Input must be case-sensitive to keep everything consistent including profile security.
* Notifications must be sent to admin profiles as soon as a problem occurs to be corrected as soon as possible.

#### 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?*

* Changes can be made to a user’s account by any user with access to that account.
* Platform updates will happen automatically.
* IT admin will need access ability to all accounts and all records. They will have some options to disable and reenable curtain driving packages.

#### 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?*

* A user will be required to have an account username and password to access any material from Driverpass.
* Driverpass asked for all security to be done on the back-end server stored via the cloud. This will also handle any data exchange.
* If hacking was to occur, any accounts associated with the hack should be locked. An email should be automatically sent to any user whose account then got locked so they can update their account with a new password.
* There is an automated password change for users who forget their passwords. The system uses information from the account to validate if the user is who they should be.

### 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 allow a user to create an account with a unique username and password.
* The system shall allow a user to select a driving and test package that suits their needs.
* The system shall display all personal data from the package selected by the user.
* The system shall let the user schedule driving lesson reservations.
* The system shall let the user modify any information to their own accounts.
* The system shall let an admin modify any accounts if needed.
* The system shall allow an admin to disable or reenable packages as slots for driving lessons fill up.
* The system shall allow a user to take practice exams.
* The system shall allow a secretary to edit driver notes to an account for the student to see on their account.

### 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 interface needs to be able to display only the data that is available to the user’s account. The user will need to be able to interact with clickable buttons or input fields.
* The different users for this interface would be the students, the secretary, the IT officer, and the owner of Driverpass.
* The users will interact with the interface via the browser. Although it will be a web-based system the users will be able to access it from any device that has an internet connection.

### 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?*

* An assumption would be that all users will have internet access.
* An assumption would be the user will only be able to view data on the interface based on the role of that user.
* An assumption would be that different users will have a variety of operating systems.

### 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?*

* The system is a new design and has no current system to piggyback off of, leaving resources to be only what was discussed.
* The timeframe for creating the system is about 15 weeks.
* Budget was not discussed and may hold us back until we talk to the client again.
* Client will only have minimal control of the system without a developer.

### 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 picture containing text, diagram, screenshot, line

Description automatically generated