# CS 255 Business Requirements Document

**DriverPass**

Daniel Schween

09/06/2024

Complete this template by replacing the bracketed text with the relevant information.

This template lays out all the different sections that you need to complete for Project One. Each section has guiding questions to prompt your thinking. These questions are meant to guide your initial responses to each area. You are encouraged to go beyond these questions using what you have learned in your readings. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client’s needs. There is no required length for the final document. Instead, the goal is to complete each section based on your client’s needs.

**Tip:** You should respond in a bulleted list for each section. This will make your thoughts easier to reference when you move into the design phase for Project Two. One starter bullet has been provided for you in each section, but you will need to add more.

## 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 Liam is the owner and wants to start a new company called DriverPass. Liam sees a need for better driver training and wants to create an all-inclusive platform to assist customers.
* Too many people fail their first driving test and Liam wants customers to be able to take online classes and practice tests, as well as on-the-road training.
* DriverPass aims to reduce the number of failed tests by offering an extensive training course containing multiple on-demand features and several training opportunities.
* Liam wants the system to allow him to access data online and offline and modify data online allowing them to stay up to date with the customer. He also wants to be connected with the DMV to monitor any changes or updates to driver requirements and laws.

### 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 will be able to track reservations throughout the student’s training.
* DriverPass wants the customer to make reservations online using their account or call/visit the office to schedule with a secretary.
* After the enrollment process, we need to identify the driver the user is assigned to go on the road with, as well as the time spent on the road, and the car being used for training.
* The IT Officer, Ian, will be responsible for maintaining the system with access to all accounts to make changes as necessary.
* DriverPass has 10 cars, each car with its own driver and three available packages:
  + Package One: Six hours in a car with a trainer, two hours per day each session
  + Package Two: Eight hours in a car with a trainer and an in-person lesson where DMV rules and policies are explained.
  + Package Three: Twelve hours in a car with a trainer, an in-person lesson where DMV rules and policies are explained, and access to an online class with an included practice test.
  + Each driving session is two hours long, and will be broken up into separate sessions
  + DriverPass can customize these sessions and add new ones, if necessary.
  + The registration process will begin with the customer calling the phone number, visiting the office, or going to the website providing information, including: first name, last name, address, phone number, state, credit card number, expiration date, security code, pick-up location, and drop-off location.
  + DriverPass must be connected to the DMV so they can update DriverPass with new rules, policies or sample questions. We should receive notifications whenever they have an update.
  + DriverPass wants to back-up its information over the cloud.

### 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 online interface should show measurable progress throughout the course of training.
* It should show what tasks are in progress and ones the customer completed. It will display test name, time taken, score, and status. The status could be “not taken”, “in progress”, “failed”, or “passed”.
* In the driver’s notes, Liam wants to show any comments the driver left as well as the date and time the lessons took place.
* There will also be an input table where the student or secretary fill in the student’s information. There should also be a page for contacting us, and a way to contact the student.
* The interface will also display the driver photo and student photo.
* In conclusion, the system will track student progress and be used as a guide to measure the student's progress as well as their results.

## 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 will be web-based. An application shall be worked on as well. Although the system is dependent on the user’s connection speed and computer specifications, the response time should be as soon as possible. The system will be updated by the IT team as necessary.

#### 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 be able to run on Windows and Mac since they are the most used. Linux will be considered if there is a demand for it. The back end will need different databases based on the platform the system is running on.

#### 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?*

* Users must create a unique username to distinguish themselves from other users. The username will not be case-sensitive for ease of use, but the password will be case-sensitive, so it has a larger range of characters to ensure it is a strong password. The system should inform the admin immediately when there are problems involving accounts, functionality, or interface, so the issue can be resurrected in a timely manner.

#### 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?*

* Changing code to handle simple modifications to an account would be cumbersome. The IT department and owner will be able to make changes to the user’s account without changing code. Platform updates will be released at 2 am when there is little to no traffic. After a platform update, The system could learn new features, new user interfaces, or modify functionality.

#### 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 is required to input a username and password to log in to the DriverPass website. We can secure the data and connection between the client and the server using a Secure Sockets Layer (SSL). This is a common method used to encrypt data in HTTPS applications. If a third party is attempting to hack an account with “brute force”, including too many password attempts, the account will automatically be disabled or locked out. In the case the user forgets their password, Ian, the IT Officer has full access over all accounts to reset their password.

### 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 the user to create an account.
* The system shall validate user credentials when logging in.
* The system shall let the user create a unique account and profile.
* The system shall display personal information, special needs, and driver details.
* The system shall allow users to browse the different packages DriverPass offers.
* The system shall permit users to schedule appointments.
* The system shall permit users to cancel and modify appointments online as well as call a secretary, if they wish.
* The system shall offer online test progress as the user completes their courses.
* The system shall allow administration to access data online from any computer or mobile device.
* The system shall permit the owner to download reports.
* The system shall give full access of accounts to the IT team.
* The system shall permit the owner to disable packages if they no longer want to offer them.
* The system shall relate to the DMV for any updates or changes to rules and policies.

### 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 system needs to run off the web over the cloud. The interface must be user-friendly and easy to use with minimal technical problems. The interface should display the logo, online test progress, user information, driver notes, special needs, a driver photo, and a student photo. The test progress should display what is in progress and what has been completed. This tab should include the test name, time taken, score, and status.
* The user will be able to interact with the services and functions the system provides, such as scheduling appointments or reviewing driver notes from their road courses. The IT team will have access to the interface in order to make improvements via updates. They will also monitor accounts so they can provide customer support. The owner shall be able to track how the interface is being used and print reports so improvements can be made. The owner will have unrestricted access to the interface. The secretary will use the interface as well; this person will be able to schedule and modify appointments. Finally, a developer will be able to work the back end of the interface so they can add or remove modules, create updates, and improve the experience.
* The users can call the phone number of driver pass to get started and schedule appointments. Another option is to visit the website on the computer and schedule appointments themselves. They will also have access to all the information needed to take online tests and view their results from the road tests. The mobile app will work just as the computer website is intended, but in a compact design.

### 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 the user has the necessary hardware to support the website and take the tests online.
* Also, we assume the user has the proper software to handle the website on their computer or a smartphone that can access the app store to download the application.
* Currency was not mentioned. So, we are assuming the user has a valid credit or debit card to pay for the services online.

### 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 user may not have the technology to support an application or website. In that case they would have to communicate with the secretary.
* The system we are building does not support tutoring, so the user will take their tests on their own with only the web and material provided to support them.
* The primary objective is to create the website first and the application second. Due to time and budget constraints, the app is secondary. The app will have to be monitored and updated frequently after the launch to optimize the experience.

### Gantt Chart

A diagram with colorful squares and text

Description automatically generated with medium confidence*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.*