# CS 255 Business Requirements Document

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 is DriverPass. They want their system to be able to help future drivers prepare for their DMV driving tests. This comes in the form of online classes, practice tests, and on-the-road driving practice.

### 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 wants the system to have a database that holds the customer’s information, including first and last name, address, phone number, state, and their card number. Customers should be able to make reservations for driving practice and be able to buy certain training packages. There needs to be a way to keep track of trips as well as the drivers and the students they’re assigned to. The owner needs to be able to have full access over the user accounts and must be able to access the data from any mobile or desktop device, so the program should be hosted on a cloud. Lastly, any changes in rules or regulations from the DMV should be automatically sent to the DriverPass program so they can update their service.

### 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?*

* When completed, the system should be able to take in user data that is held in a database. The customer should be able to buy different training packages and be able to schedule pick-up and drop-off points for their training sessions. The customer should also be able to reschedule or cancel whenever they want. And the owner should be able to change or adjust values within the user-information database whenever the need arises.
* This process can be split up into the tasks of building the class diagram, getting the customer approval, then building the user interface, and adding the business logic to the system. These are the measurable steps we can include to track our progress and ensure the client’s needs are being met.

## 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 and cloud-based to minimize our workload.
* The system shall be able to be updated fairly quickly, as it needs to reflect current test progress as well as incoming DMV rules and regulations

#### 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 run over the cloud and be compatible with all desktop and mobile browsers
* The backend will need a server to handle requests
* A cloud-based database is required

#### 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?*

* Different users will have accounts with logins and identifying details, such as name, email, phone number, security code, etc
* Inputs are case sensitive
* The admin will be notified after a certain amount of incorrect log-in attempts for accounts

#### 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?*

* Users will be able to change their password as well as their personal information, such as payment details, address, phone number, etc
* New accounts can be made and deleted by users as well as staff from DriverPass
* The platform updates will happen in the background and should not affect a user’s current session
* IT Admin will have full access over accounts for employees and customers in case they need to change a password

#### 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?*

* Users will log in with a username and password
* HTTPS will be used for sign in requests and information changes to ensure security
* Users have 3 attempts to log into an account. Following that, the account will be locked and a notification will be sent to the IT Admin. They will then send the account’s owner an email confirming if it was them and offering to help them change their password
* If a user forgets their password, they can have an email sent to the associated email account so they can reset their password. The IT Admin also has the ability to change passwords if they were needed to for some reason

### 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 username, a password, and personal information such as name, email, phone number, payment information, etc
* The system shall allow users to log into their accounts with a username and password and will allow them to change their password
* The system shall be usable on desktop and mobile.
* The system shall allow users to make reservations for driving practice and tests both online and by phone
* The system shall allow users to cancel or modify their reservations
* The system shall identify driver-customer pairings when they are out practicing, along with the time and car they are using
* The system shall display three different driving packages with the potential for more to be shown in the future
* The system shall allow driving packages to be removed when needed
* The system shall allow user to set a pick-up and drop-off location
* The system shall be connected to the DMV rules database and adjust for DMV updates
* The system shall display user grades

### 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 will be web-based and run through browsers both on desktop and mobile
* The interface will include a home page, an account view page, a course material page, a practice reservation page, a student information page showing their grades and course progress, and a contact page for teachers and other staff at DriverPass
* The different accounts will be: student/customer, DriverPass owner, IT Admin, and secretary
* The student/customer will be able to create an account, add/change personal details, schedule/modify/cancel tests and driving practice, view training material, and view their grades and course progress
* The DriverPass owner will be have full access to all accounts and will be able to change passwords for all users
* The IT Admin will have complete access and control over accounts with the ability to change passwords and information
* The secretary will be able to schedule and modify reservations

### 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?*

* All users have quick and easy access to the internet for scheduling and other things
* Users will have a device that is able to access the browser-ran website
* The internet will always be available to the company to make updates and change information

### 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?*

* Without an internet connection for either the user or the business, the system will not function properly for them; everything requires an internet connection
* We will have to vet potential driving teachers to make sure they are suitable
* The current build of the system does not include the ability to customize packages
* In the future, developers will be needed to add this addition, as well as others, to the system

### 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.*

