# 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?*

* **CLIENT**
  + **Students preparing for driving test to get license**
* **SYSTEM SHOULD DO**
  + Train students for the driving test at the DMV
  + Online classes and practice tests for driving test
  + Schedule appointments to practice with drivers

### 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?*

* There is a void in the market when it comes to training students for the driving test
* The owner of DriverPass wants to provide better driver training
* Many people fail their driving tests
* Online practice tests
* Online classes
* On-the-road training
* Provide all DMV rules and policies
* Constantly updating data
* Allow the admin to access data and download reports
* Allow different rights and roles for the employees
* Allow admin to see what driver is matched with what customer
* System should run over the cloud
* Provide test progress to the customer
* Input form that the student or secretary fills out

### 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?*

* **Liam - Owner**
  + Access the data from anywhere online
  + Access the data through a mobile device
  + Download reports and information that can be used through Excel
  + See who made a reservation, who canceled it, and who modified it last
    - Print an activity report of the above
* **Ian – IT Officer**
  + Full access over all accounts
  + Be able to reset passwords
  + Block members access
* **Customers**
  + Make appointments, cancel, and modify appointments online
  + Customers need to be able to make reservations for driving lessons
    - Day and time when they want to take that lesson
    - Make reservation online through their account
    - Call or visit office to schedule an appointment
    - Track which user is matched up with a certain driver, time, and car
* **Three Packages user can select online**
  + Package One
    - Six hours in a car with a trainer
  + Package Two
    - Eight hours in a car with trainer and lesson where DMV rules explained
  + Package Three
    - 12 hours in a car with trainer, lesson where DMV rules explained and access to our online class which includes practice tests
  + Be able to disable packages
* **Website is connected to DMV and receives notifications when new rules and policies are updated.**
* **System needs to run over the cloud so there is less dealing with backup and security.**
* **Online test progress should show the tests the customer took. It should show what’s in progress and the ones that the customer completed. It should also include, previous scores, time taken, and notes from the driver.**
* **Page for contacting company and a way for company to contact student.**

## 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 run on every operating system.
  + Android
  + IOS
  + Windows
* The system should run at a speed where web pages are loaded withing two seconds. The users should be able to navigate the site on a computer or smart phone without any lag.
* The system should be updated regularly. A weekly check should be done to see if any new regulations or laws have come out through the DMV. There should also be security updates, and notifications of any issues so they can be resolved.

#### 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 Windows, Unix, IOS, and Android.
* The database will be set up through the cloud. The customers will be able to access their account through their mobile device or personal computer. The admins will be able to view customers’ accounts from anywhere as well.

#### 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?*

* We will distinguish between different users by utilizing username and password.
* The password will be case-sensitive as well as requiring a minimum of eight digits and one special character. This ensures that the password is very secure.
* The system will inform the admin when an incorrect password is entered more than three times. If this situation arises the user is prompted to answer security questions and reset their password. Also, the admin will be informed so they can log it in their security activity logs.

#### 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?*

* To be able to make changes to the user such as add, remove, or modify the code must be accessed.
* Platform updates will be handled by rolling out the appropriate updates for Android and IOS when changes are made. The site will be temporary offline for maintenance at a time that most people are asleep.
* The IT admin needs to be able to access the code and modify the code. They must also have access to security logs to view any incidents that may have occurred.

#### 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?*

* For the user to log in they will need their correct Username and Password.
* Securing the data exchange between the client and the server can be done using an SSL security protocol. This will utilize digital certificates to ensure each party is who they say they are.
* If there is a “brute force” hacking attempt the account should be brought offline and the admin should be notified immediately. If the admin cannot stop the attack the site will be brought down to prevent further damage.
* If the user forgets their password, they are required to answer the security questions. If answered correctly an email is sent to them to reset password. If they forgot their security question answers, they must contact customer support.

### 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 allow user to reset password.
* The system shall work on mobile platforms.
* The system shall check for DMV updates weekly.
* The system shall allow practice tests to be taken.
* The system shall show test results and progress.
* The system shall notify the admin if user makes a change to a record in the system.
* The system shall allow customers to make reservation or cancel reservations.
* The system shall track what driver is with what customer.
* The system shall provide three package options to the customer.
* The system shall update security and site layout periodically.
* The system shall run over the cloud.
* The system shall provide an input form for the student’s information.

### 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 user interface on personal computer platforms (Windows, Linux, IOS) will consist of keyboard and mouse.
* The user interface for the mobile application will consist of touch screen such as finger movement.
* The user will need to be able to access the site, take tests, look at test progress, schedule or cancel reservations, update account information, and view who their driver is.

### 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?*

* My assumptions include.
  + Understanding the IOS platform.
  + Understanding the Android platform.
  + Understanding how to program for Windows, IOS, and Linux.
  + Understanding how to set up an SSL security protocol.

### 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?*

* My limitations include.
  + Programming on different platforms may require different programming languages. Some members on my team may not be proficient with different languages.
  + If we run into errors or must back track in our programming, this could increase our timeline resulting in more cost for the project.
  + The budget as stated could be affected by the time it takes to complete.
  + As for technology, if members don’t understand some of the operating systems it could be difficult to develop on them.

### 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.*

Timeline

Description automatically generated with low confidence