# CS 255 Business Requirements Document Template

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 project is for the client DriverPass, which is to be a system to help customers train and learn to drive via access to tests and driving lessons. They want people to be able to make reservations for driving lessons, either by phone call or online.

### 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 a system to be created for their customers to create and reserve driving lessons, or to take practice tests. They want this system to be created to have a better way to help people pass their driving tests, as many people fail them.
* Driverpass also wants the system to allow the owner to be able to access the data in the system from any device online. Or be able to download this data offline from any device.
  + This may also require something to store all this data in the system, i.e., Database?
* Needs web interface for making reservations for said driving lessons. By making, canceling or modifying appointments online.

### 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 will allow users to create reservations to reserve a specific time (or multiple times) for driving lessons to occur.
* The system should be able to store and track the information of all reservations and the customers contact information. And for users to be able to modify or cancel reservations and have it been updated to show said changes. It should also be able to show who had canceled or modified reservations.
  + Such information to be stored should be first and last names, address, phone number, state, and credit card information.
* The system should also allow specific users (who chose a specific package) to take practice tests alongside reserving driving lessons.
  + Driving lessons reservations should also allow providing a pickup location and drop-off location as well.
* This system will also need to keep up to date with DMV compliance by checking for updates. This will require a connection to the DMV as to update with any changes to rules or policies.

## 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?*

* This must be a web-based system (preferably cloud)
* System should have reasonable response time, longer than 2-3 seconds would be less than ideal.
* System needs to stay up to date with DMV requirements, monthly updates may be best.

#### 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?*

* System is web-based so this system should be available on any web browser, either Windows, Mac, or otherwise. Even mobile device browsers would need to be compatible.
* Database most likely required to store data.

#### 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 roles given for different users, each most likely requiring passwords for these different role accounts.
  + Passwords for account most likely case-sensitive
* Printable activity report should be created daily, will contain information like who made, canceled, or modified a reservation to discern who is responsible. However, any serious problems should have a means to be reported immediately.

#### 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?*

* Code should not require changes to add more users, simply the addition of data to storage for said users. The code should be designed in a way to never need to be changed for something like this.
* The system should remain up to date alongside any updates to platform, as to not lose compatibility or browser support.
* The IT admin would need access to the database where data is stored, as they are responsible for modifying and maintaining the system. Aside from that, perhaps access to the web-based (or cloud) server running it to maintain things.

#### 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?*

* Password protected accounts for users to log in.
* Perhaps a security question can be linked with the account to have some form of secondary protection.
* Two ways to protect against “brute force”:
  + Check for location from login, if the distance differs from normal location, perhaps send an e-mail confirmation to the account, if not authorized the account could lock until they authorize it via e-mail prompt.
  + If account login attempts exceed a certain amount, as in many continuous attempts to login have failed, perhaps the account could be locked like before and would need to be unlocked via e-mail associated with the account.
* There should be a “forgot password” option when logging in, and users would have to possibly answer their security question mentioned above, or have an e-mail be sent for password reset or recovery.

### 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 lock account If login location differs from account information.
  + Or: The system shall lock account if login attempt failures exceed pre-determined numbers.
* The system shall send e-mail in the event of forgotten password for password reset.
* The system shall allow the scheduling of appointments and keep the data of said appointments.
* The system shall allow users to add or update their own information to account.
* The system shall remain up to date with DMV requirements

### 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 will need to be compatible to work with users either from desktop or mobile browsers.
* User types are customers using the app and the staff/administrators of this app.
  + Customers should be able to register an account, add their information, and choose which package to purchase, and from there schedule appointments
  + Staff/Admins (IT officer, or secretary) will be given full access to manage the system, this may include adding information for customers, and adding/removing/modifying appointments in their stead.
* Users will be able to interact with the interface via web browsers either on computers like Windows/Mac or through smart phone mobile browsers.

### 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?*

* For password recovery, this requires an e-mail so an assumption could be made that all users would have an e-mail account.
* To even access this app, you need to have access to a browser, so the users must either have access to a computer or a smart phone with browser capabilities.
* Due to the required compliance with DMV, there needs to be a way for that compliance to be checked and updated as time goes on. It is not however specified anywhere else how this will be done.

### 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 time frame for this project seems to hinge upon the fact that one task will be completed in a timely manner, if one task takes longer to reach, the next task that has dependencies on the one before it, will need to be complete before it can begin. I see a problem with the amount of time it will take for each task to be done, let alone the whole system be complete in the timetable we have been given.
* The concerns of resources or budgets has not been addressed, and could be a considerable limitation on the project, it is however out of the scope for what we know.
* Once again due to the required compliance with the DMV, this is something beyond our control and we must adhere to their rules for this app, therefore this could be a limitation upon the system, as it is possible for change to occur with the DMV rules that we could not anticipate.
* There may be limitations when it comes to making an app that is compatible with both computer and mobile device browsers.

### 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.*

I have created two separate charts, one through Excel, and then the older one I had made with Lucidchart. I was unsure what was best to use, so I have included both.



