# 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 main purpose of this project is to create a system, DriverPass, that provides improved driving training and lesson packages. Employees need to access data offline and be able to make changes/additions while online only.
* The training will be provided to the customers as a preparation option before taking drivers test at their DMV.

### 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 assist customers with passing their drivers test in fewer attempts than without DriverPass, even with only one try.
* DriverPass wants to offer online courses and practice tests to provide useful information and experience to customers.
* DriverPass would additionally offer on-road training as another option.
* There are necessary components to this system, such as vehicle management, tests, documentation, instructor management, and a website with essential features and data storage.

### 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 needs to provide:
  + Creation of an account
  + Appointment scheduling (online and offline capable)
  + Password resets and user settings
  + Handle multiple package offers
  + Advanced authorization for specific employees
  + Track which user is assigned which driver time and vehicle, as well as reservations.
  + Connect with the DMV to update information
  + Display which tests customers took and their progress
  + Display driver notes

## 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?*

* Web-based cloud environments
* Load times of a few seconds
* Feedback for load times
* Monthly system updates

#### 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 should be compatible on as many PC and mobile browsers as possible for user convenience
* Back end should have databases for storing user and system information
* Back end should also have a web-based server to process requests

#### 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?*

* Web front end uses individual session cookies in order to distinguish between users.
* Passwords are case sensitive while other inputs are generally not.
* There should be a daily report of all errors that day with immediate emergency notifications for critical errors.

#### 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?*

* Website and applications need to remain up to date.
* User changes/edits will be done on the back end without changing code
* IT administrator access to servers and databases used

#### 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?*

* Passwords required for login. Account locks up after X amount of failed attempts, for longer amounts of time after each X batch of attempts
* Could implement 2FA for more layers of security
* Selecting a ‘forgot password’ link either sends a temporary password or password reset instructions via email

### 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 passwords when logging in*
* *The system shall send verification codes to the user when 2FA is active*
* *The system shall lock up the users account after X amount of failed login attempts*
* *The system shall send an email to the user for the chosen account/password recovery method*
* *The system shall update user information on the back end based on user or administrator input*
* *The system shall track both available and already booked appointment times.*
* *The system shall schedule user appointments based on user or administrator input*
* *The system shall notify administrators if DMV rules change*

### 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 UI will be web-based, and automatically adapt to desktop or mobile platforms
* Users will access front end functions through the browser features
* Customer users will have access to their own account information, such as purchase and order history. It will further allow for transactions to occur.
* Administrator users will have access to the scheduling of appointments, and the ability to access a users account to schedule an appointment for them.

### 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?*

* I assume that all users will have access to the internet and have a modern web browser or that the users will already have an email set up. It is also assumed that the DMV rules can be tracked in the first place.

### 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?*

* 16 weeks are needed to complete the project
* Not possible to predict major changes/updates to web browsers, or the DMV either
* Must design front end to be compatible with all major web browsers which may not be useful or possible

### 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.*

*The image displays a timeline of events from January to March. The information is as Follows:
Collect Requirements January 22 to February 4
Create Use Case Diagrams February 11 to February 18
Build Activity Diagrams for each Use Case February 15 to March 9
Research User Interface Designs February 27 to March 7
Build Class Diagram March 1 to March 9
Get Customer Approval March 10 and 11
Build Interface March 12 to March 24*

This image shows the timeline of events from late March to early May. The info is as follows:
Link DB to Interface March 24 to April 3
Build Business Logic April 5 to April 27
Test System April 27 to May 7
Deliver System on May 8 and 9
Have Sign-off meeting May 9 and 10