# 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 client for this project is DriverPass and the owner, Liam, would like to create a cloud-based system that provides online courses and tests for driving, and aids in scheduling on-road training that can be accessed from anywhere on any device.
* DriverPass believes the market is currently lacking in driving training
* DriverPass sees a void in the market for driving training and would like to take advantage of it

### 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 believes there is not adequate training provided to students taking their driving test and would like to create a system that creates a solution to this issue that includes offering up to date training courses and tests, but also, they will provide on-road training as well that can be scheduled using the same system.
* DriverPass would like for the system’s data to be accessible from anywhere on any device that can go online using the cloud, the system needs to be able to be modified to stay up to date with the DMV requirements, maintain an activity log of any changes made for scheduling or cancelation adjustments, provide different levels of access to each employee, and record the user’s status throughout their training and tests.

### 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 should be able to:
* Create personalized accounts with phone number, customer name, address, and credit card information
* Reset password if forgotten
* Employee’s should have a different level of access depending on their status in the company
* Track appointments, what driver and car are matched with what customer, the pickup location, drop off location, and time
* Display a web-based interface to users to allow for information to be entered and received by the company
* Notifications for new updates from the DMV to keep the training courses up to date
* Allow users to select from different packages for scheduling on-road training
* Modify their appointments for training
* View the status of completion of each training course and test.
* Allow for drivers to enter driver notes after training

## 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 be web-based
* The system should be fast and scalable to prevent long loading times for users
* The system should be updated regularly to ensure it is running efficiently and to patch any issues that may arise
* The system should be updated at lower traffic times to prevent a disturbance in user learning and with as little downtime as possible

#### 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 desktop and mobile browsers (Chrome, Safari, Firefox, Edge)
* The backend requires a database to store information
* The Cloud should be utilized to enable users to access their accounts from multiple devices

#### 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 should be able/prompted to create their own username and password
  + Passwords should be case sensitive
  + Require at least 8 characters
  + Require a special symbol (‘!’, ‘&’, ‘@’, ‘\*’)
  + Usernames should also be unique, there should be no repeats of usernames
    - The system should verify the username entered has not been used
* Multi-factor authentication should be offered as an option for extra security of accounts
  + Users should be able to decide if a code should be sent via personal email or phone number that is linked and verified to their account
* Accounts should be locked after five failed login attempts, admin should be notified, and user will have to contact DriverPass to unlock their account
* Any bugs or glitches should be reported to the admin immediately
  + There should also be a section to report feedback of the site back to DriverPass

#### 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?*

* Changes such as add, remove, or modify should be able to be made without changing the code
* System should adapt to any platform updates without issue
* The IT admin should have access to the database and webserver

#### 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?*

* A password created by a user is required for access to their accounts (both customer and admin)
* Users should be able to reset their passwords via a “Forgot password” link
* If there is a “brute force” hacking attempt, accounts should be locked after five incorrect login attempts
* Two factor authentication should be utilized through email address or phone number
* Utilizing cloud technology allows for built in security to ensure the connection and date exchange between client and server is at a minimum risk

### 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 login and password to allow access to their personal account
* The system shall display a customized interface to users
* The system shall provide learning courses for users
* The system shall allow for the user to schedule on road driving tests
* The system shall track the progress of users throughout completion of the course (courses in progress, completed)
* The system shall allow different levels of access to users and employees of DriverPass
* The system shall track an activity log of changes made in the system (appointment time adjustments, appointment cancellations, and modifications)
* The system shall track which user is matched with a certain driver, time, and car
* The system shall display three different packages to users for purchase
* The system shall allow for customization of packages by the owner of DriverPass
* The system shall notify DriverPass of any DMV updates
* The system shall confirm user details (address, first and last name, credit card information, and phone number)
* The system shall be available online and offline
* The system shall allow the user to reset their password
* The system shall allow for the admin to disable packages
* The system shall display a “contact us” page with information to contact DriverPass
* The system shall display

### 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 should be accessed through different devices via the internet (computers, phones, etc)
* The different users of the interface are admins and customers
  + Admins:
    - Admins should be able to modify accounts as necessary
    - Add, remove, and adjust appointments
    - View user accounts
    - View user progress
    - Adjust packages for sale
    - Owner should have a different level of access to print activity reports
  + Customers:
    - Purchase displayed packages
    - Create accounts with username and password
    - Modify password when necessary
    - View progress of courses and tests
    - Schedule driving training

### 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?*

* Users will have access all the time, other than scheduled down times for maintenance
* Users will understand how to navigate the website
* Training will update automatically based on DMV updates
* Users have access to internet
* The budget for building the system is sufficient
* The company has enough drivers, currently they have ten, to schedule for each customer

### 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 budget was not stated in the interview, the budget needs to be sufficient enough to complete the system and to cover continuous maintenance
* Customers may not have access to internet
* 16 weeks to build the system may not be enough in case any issues arise
* The system should work on many different devices without issue and be compatible with multiple web 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.*

My Gantt chart is included below.

A picture containing text, screenshot, diagram, number

Description automatically generated