# 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

* *create an online system that allows DriverPass’s clients to:*
  + *schedule appointments,*
  + *take and review practice tests,*
  + *view information related to previous on-the-road trainings.*
* *The DriverPass Company needs to be able to:*
  + *assign drivers to appointments*
  + *view client information,*
  + *upload driver notes*
  + *download information for offline use*
  + *update the system based on company needs and changes to the DMV regulations.*

### System Background

* *The owner of DriverPass, Liam, noticed that there is a need for better driver training.* 
  + *Many people fail their tests at the DMV.*
  + *DriverPass wants to provide:*
    - *online classes*
    - *practice tests,*
    - *on-the -road training.*

### Objectives and Goals

* The DriverPass System
  + Is cloud based
  + Is flexible with the ability to change and disable options to select certain packages
  + Automatically backs up system
  + Automatically handles security updates and access rights
  + Automatically handle user’s password reset requests
  + Automatically notify DriverPass company when changes are made to DMV requirements
  + Automatically assign drivers to user appointments based on availability
* DriverPass company can
  + Access and modify data online
  + Download data to be used offline.
  + Schedule, modify and cancel appointments
  + Access any user’s or driver’s appointment history, including:
    - Lesson time
    - Start time
    - End time
    - Driver Comments
  + Access and modify any driver information, including:
    - Driver’s schedule
    - Driver’s car
    - Driver’s contact information
* DriverPass’s clients
  + Can access the system by desktop or mobile devices
  + Can create accounts
  + Request to reset password
  + Choose and pay for a plan
  + Schedule, modify and cancel appointments
  + Access only their own appointment history, including:
    - Lesson time
    - Start time
    - End time
    - Driver Comments
  + Access online content if purchased
  + Take online practice tests if purchased
    - Monitor test status:
      * not taken
      * in progress
      * failed
      * passed

## 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 driver pass system should be web based and able to be used in any modern browser.
* The system should load pages in 3 seconds or less.
* The system should be updated multiple times a day

#### 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?*

* As a website, the system should be available on any modern browser.
* The backend could run on Linux or Windows servers depending on cost and other considerations.
* A database will be required to store data on appointments, students, drivers and test progress.

#### 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?*

* To avoid issues if two or more users have the same name, the system should require unique usernames.
* Password input should be case sensitive for greater security
  + Usernames should be case insensitive as user often find case sensitive username difficult.
* A log should be kept of events such as automated password requests, so that IT can investigate when an issue occurs.

#### 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?*

* The system should be able to add remove and modify users without changes to the underlying code.
* The system will need to be updated to keep with evolving security needs.
* The IT admin will need full access to the system to make these security updates.

#### 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?*

* To log in, a user will need
  + A unique username
  + Secure password
  + An optional 2 factor identification for admin and security minded users.
* The system should use end to end encryption
* To prevent brute force attacks, the system should lock an account after a certain number of incorrect passwords are entered
* If a user forgets their password, they can have a single use password reset link sent to the email associated with the account.
* If a breach or suspicious is detected, the system should lock the accounts affected and alert the admin.

### 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 offer three different driving packages.
* The system shall validate user credentials when logging in.
* The system shall add user reservations to the database
* The system shall display reservation information for the user
* The system shall provide practice tests, and classes.
* The system shall show the tests and work the user has already completed

### 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 will interact with the interface through a web browser
* The types of users include:
  + Customers
    - Access online courses,
    - Take practice tests
    - schedule appointments
    - make payments
  + Drivers
    - View appointment information
  + Owner/Office personnel
    - Add and remove purchase options
    - Make appointments on behalf of users
  + IT Admin
    - View and Modify database
    - Modify Accounts
    - Make updates

### 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?*

* This design assumes
  + All users have access to an internet browser.
  + All users have access to internet connections.
  + Users with certain disabilities will be able use their own adaptive tools. E.g. a blind user will use a screen reader.

### 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 system must follow current web standards
* The system must be finished in the allotted time
* There is not an infinite supply of drivers, so appointments must be limited.
* Drivers can only support user within a certain distance of 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.*

Graphical user interface, application, table, Excel

Description automatically generated