# 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?*

* DriverPass is a company looking for a way to help student drivers more easily pass their DMV driving test.
* DriverPass is owned by Liam and the IT officer is Ian.
* DriverPass would like to offer online tests to help prepare students for the DMV driving test.
* DriverPass would like to allow students to schedule appointments using this system or by calling their secretary (who would need access to create appointments).
* DriverPass would like to allow drivers to leave notes on each driving session for students to review.

### 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 would like the system to be able to allow users to schedule road tests and driving classes to be better prepare users for the DOT drivers test
* To do this DriverPass would like some of the following functionality:
* DriverPass would like the system to track who made what changes.
* DriverPass would like the system to work with an interface to display progress to the student users.
* DriverPass wants to be able to enable and disable different packages as they are needed.
* Driverpass would like to be able to see information about all their users (test info, driving info, etc.) and be able to download this information from any computer/mobile device.
* DriverPass wants to be able to access user login information if a user can’t remember their information.
* The system needs to run off the web, preferably off the cloud.
* Be able to connect with the DMV to update as requirements change.
* DriverPass has a design they would like to follow for the interface that has been attached to the end of this document (Attachment 1)

### 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?*

* Students and the secretary should be allowed to schedule and view appointments.
* System should have different levels of access and security based on user information.
* The administrator should be able to recover access to accounts as needed.
* The owner should be able to access information general information about accounts, as necessary.
* The system should be able to be accessed from any computer or mobile device.
* The drivers should be able to leave notes about driving sessions.
* First case diagrams and activity diagrams should be built.
* Concurrently, a team should be researching interface designs.
* After the case diagrams and activity diagrams are complete work on the class diagram con begin.
* Then we need to seek approval from the client.
* Following the diagrams being finished, building the designs can commence.
* Then we must link the database to the interface and build the business logic.
* Final testing should be done to check for bugs.
* Lastly, we will deliver the system to the client and there should be a sign off meeting.

## 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 must be updated as the DOT changes test requirements or information
* The system should be able to run as a web-based program that is also available offline
* The system should run in real time and update as it connects to the internet

#### 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?*

* This system should be available across multiple platforms
* This system should be updated across platforms as tasks are complete (database should be updated)
* Users should be able to make changes that would apply across multiple platforms

#### 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?*

* Each username should be unique and case sensitive
* The system should inform the administrator if there are login issues

#### 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?*

* Each user should be allowed to update their own account information
* The administrator should be allowed to modify all account information
* There should be a secretary account allowed to modify certain information from all accounts
* The system should allow for system updates as the DOT updates their own information
* The system should update during the time where the lowest number of users are impacted

#### 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?*

* The user should be required to submit proper username and password that match exactly to be logged in
* The username and password should be case sensitive
* The user should be given a limited number of attempts to login before having to talk to the admin
* Login information should be encrypted and put into a hash table as to be more secure
* The decryption code should only be given to few people and never shared online
* The admin should be able to change passwords when requested by the user
* The user should be allowed to change their password after answering security questions

### 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 provide information to the boss about users of the system
* The system shall lock the account after a specific number of login attempts
* The system shall provide the administrator access to change account information
* The system shall provide the user access to change their own information
* The system shall provide the secretary the list of users they are allowed to change
* The system shall report any potential security threats to the administrator

### 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.)?*

* Each user should have a similar interface, but some users should have access to more interface options (e.g. the admin should have access to make changes to all accounts whereas the user should only be able to change their own)
* The main interface (Attachment 1 below) should be seen by the user
* The drivers should have a simplified interface with a list of students they are driving with and a place for note about each session
* The secretary should have a simplified interface with a search option to see/modify student information
* Once the secretary has selected a student, they should be able to see the interface below, but only be allowed to modify information and not take tests
* The administrator should have a modified interface that allows them to see password reset requests, user issues, and a place to search all accounts
* All users should be allowed to access the user interface on any device (e.g. mobile phone, laptop, desktop, etc.)

### 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?*

* We assume that the administrator has a general understanding of computer systems
* We assume that all users have access to the technology required to run the system
* We assume that all users will not need access to the system while it is being updated

### 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?*

* This system could be time consuming
* This system might have limited useability for the drivers at first
* The interface requested by the client might not be perfect for all users
* Unspecified resources and budget might limit how fast the project can be complete
* The limitation on the number of login attempts doesn’t perfectly protect from brute force attacks
* The encryption/decryption is not a perfect protection from all attacks

### 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, calendar

Description automatically generated

**Attachment 1**

