# 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 DriverPass wants to build a system that trains students for their driving test at the local DMV by combining online classes, practice tests and scheduled driving tests. DriverPass would like their system to be accessible online from any device to check reports, allow customers to schedule appointments and to be notified by any change in DMV rules and policies.

### 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 noticed many students were failing their driving test and saw a void in the market in this area. DriverPass needs the system to hold customer information, allow customers and his secretary to insert customer information to schedule appointments. The system needs to notify DriverPass when changes are made at the DMV, hold three different driving packages, setup driving dates, online classes and practice tests. DriverPass would also like the database and security to be handled by the cloud.

### 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?*

* DriverPass should have a fully functional system with a specific layout for the user’s profile. The system should be accessible online at anytime by the owner, Liam to review reports and schedules. The system should monitor the DMV webpage and notify DriverPass of any change in policy. This system should also hold information for three packages.
* The system is going to need a database to hold records of customers and schedules. There will need to be a log-in screen with proper security. Also, DriverPass will need to be notified when any policy changes at the local DMV. DriverPass will also need to continually pay for the cloud database and security.

## 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.*

* DriverPass requested several nonfunctional requirements such as:
* Liam, the owner should be able to access data from any computer or mobile device.
* Students should be able to take online classes and practice tests.
* Liam needs to be able to download reports and other information that he can work on at home.
* Ian needs to be able to have full access over all accounts and be able to reset passwords. He also needs to be able to block access to former employees.
* Customers should be able to make reservations.
* Customer should be able to chose from three different packages.
* The application should be updated based on the DMV’s updates.
* Liam wants a specific interface look that shows online test progress, which tests were completed, time taken, score, status and if the customer passed or failed.
* There needs to be a driver’s notes page, input page and contact us page.

#### 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 needs to run in a web-based application environment. The customer DriverPass also mentioned wanting to use the cloud. Speed was not specified, but with the cloud handling the data it should run relatively fast. The application should be updated as often as data is received from customers. The system only needs to be updated when new things are added, such as new driving packages, aesthetics or pages.

#### 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?*

* Being a web-based application, it should run on all platforms, unless certain web-browsers are unable to access the page, which when writing for web-development, developers should make it available for all web-browsers. The same goes for phones, there could be an application for Android and for Apple. The back end will have a database that is in the cloud. However, DriverPass employees will be able to alter data based on their roles.

#### 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 have their own username and password. If the username is taken, it should not be allowed to be used again. An admin should be notified after a user enters their password incorrectly three times. The admin should then lock the account and request more information on the user before unlocking the account and making a new password.

#### 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?*

* It is common practice to have specific functions that are reusable to add, remover and modify a user which also works with the database to do the same. The system should be fine with updates once it is already certified with the platform. The only thing that would make this significant is if the platform became a new platform (Windows 10 to Windows 11). The IT admin needs access to credentials and authorization to add users, block users, and change passwords.

#### 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 cloud is handling much of the security, but Ian said he would like there to be a customer or employee name or role along with a password. Since this is a web-application using proper HTTP protocols will help secure the connection between the client and server, not to mention other types of security the cloud has. If the account is known to try to hack, the account should be blocked out and investigated. If the user forgets their password there should be a prompt to reset, it. Ian said he wanted to oversee the credentials for employees, but said he wants the customer’s to be able to automatically change their password.

### 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 password when logging in.
* The system shall lock user accounts after five consecutive failed logins.
* The system shall send email with a code to unlock their account and create a new password.
* The system shall update the database from modifications from a user or admin.
* The system shall track available appointment times and user appointments.
* The system shall schedule customer appointments according to customer input.
* The system shall have an API to the DMV that updates when the DMV policies update.

### 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 interface needs to be a web-application that can be used on desktop and mobile browsers.
* The users are employees and customers of DriverPass.
* The customer will need to be able to schedule appointments in the interface, buy packages, schedule drive times.
* The customer should be able to look at their profile and see how they did on tests, status of tests, test name, and passed or failed.
* The secretary needs to be able to add and remove appointments.
* The IT Admin needs to be able to change credentials for authorization.
* Liam, the owner needs to be able to print reports from the interface.

### 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?*

* The users have internet access.
* The users have a desktop or mobile browser.
* The users are old enough to drive.
* The DMV allows an API call from DriverPass.

### 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 might not work in all web-browsers.
* 15 weeks might be to little of time to complete the project.
* The DMV, being a government agency, might not trust a company to be linked to them.
* Possible change in platforms (Windows 10 to Windows 11).

### Gantt Chart

Table

Description automatically generated