# 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?*

* Develop and design an online application for driving students that will allow them to study for DMV driving tests.
* Clients company Driver Pass, Owner: Liam, and IT officer: Ian.
* The purpose of this project is to assist driving student with a better driving train in online learning and practice test taking.
* In doing so he hopes to decrease the failure number of test takers at the DMVs.

### 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?*

* Goal is to help driving students to pass the DMV driving test.
* The system should allow users to create a profile
* Allow the company to set different roles and rights
* Allow students to take online practice test and classes
* Offer packages deals to students
* Package deals should be able to be turned off and on as seem fit for the business needs.
* Track progress of each student and any changes that someone has made.
* Allow students to schedule actual driving lessons with a driving instructor of their choice.
* Scheduling also includes canceling, rescheduling as well as the initial schedule. Updates and changes should be tracked and reported to company mediators.
* System should also track appointments made with and the availability of each instructor this also includes vehicles being used.
* System should be online and able to be accessed via personal computer or mobile devices. This should be accomplished by using a cloud-based server.
* Data should be able to be downloaded for analyzing.

### 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?*

* System should allow students to create a profile with their personal information.
* System should allow students to take online classes and practice test for the DMV driving test.
* System should allow students to schedule, reschedule or cancel driving lessons with an instructor.
* System should be able to handle multiple users with various roles and rights.

## 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?*

* Client requests a web-based system that is usable on a PC, MAC, or mobile device.
* System should run on a 3rd party cloud server to eliminate onsite upkeep and upgrades.
* Should be supported by all browser types such as Google Chrome, Microsoft Edge, Mac Safari, Firefox and so forth.
* The interface should be easy to navigate for all end users. From the most basic computer user to the most experienced user.
* Menus should provide enough information so that the user knows where and what they are doing.

#### 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 application should run on a Linux system for full customization of the kernel and client’s needs.
* Database should be SQL unless specified differently by the client.
* There should be security features in place to support the integrity of both the users and the systems data and structure.

#### 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?*

* Username and password for logins
* 2-way authentication will be added for extra security for student logins.
* Employee logins will be limited to the company network unless authorized through a VPN.
* Titles and levels of access for employee logins to establish what can and cannot be accessed, modified, or shared.
* Passwords will follow the current standard for creating a password and be required to change every three months for employees and six months for students.

#### 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?*

* System will be designed to allow users to be add/remove/modify without changing code. This will apply to both the student and the employees with the correct access.
* System updates should be visited anytime an issue occurs or when platforms push an update that will hinder the performance of the system.
* IT admin should have access to resetting passwords, network traffic, server performance, software updates and

#### 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?*

* Server will be using HTTPS as well as a firewall.
* User will be logging with username and password if successful than 2-way authentication will send a code to finalize the login.
* After 3 failed attempts account will be locked out and the user will have to call IT support for password reset or use the password reset tool online.
* System should track IP location as another way to prevent hacked accounts or hacks from other countries.

### 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.”*

* This system shall open to the home page
* This system shall prompt to login as a returning user or create a new profile
* This system shall go to the main menu where the student will choose what they wish to work on
* This system shall go to a scheduling form where the student can schedule driving appointments
* This system shall go to a package menu where the user can select package promotions
* This system shall send notifications and reminders to both the student and the employees
* This system shall allow password resets
* This system shall user’s profiles with restrictions
* This system shall update as the DMV rules and regulations change
* This system shall keep track of student’s progress as they continue to study
* This system shall run a database the tracks all users, updates and information related to the DriverPass application.

### 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 should be structured for each role based on the user’s needs, functions, and responsibilities.
* The interface for the IT staff should be able to access password management system, user account information, monitoring the network traffic and allow to push updates.
* The Administrator account should have access to all features and will be assigned to the Owner Liam. This account will allow to pull data for reports as well as all the other features DrivePass staff will have.
* The instructor interface will display his schedule with times, dates and all students information.
* Students interface will allow for navigation to the home page, user registration, testing sections, study sections, driving lesson scheduling, package deals, thier person profile and progress reports.

### 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?*

* DMV documentation is always updated and current.
* Most users will be one mobile since it is compact and convenient to use anywhere.
* DriverPass offices are equipped with computers, internet access, IT infrastructure, proper staffing.

### 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?*

* Being a web-based application the internet and connectivity to the server is curial for operation. Any downtime will result in the user unable to use the application.
* Outsourcing the server to a cloud company would limit equipment to what is offered for server options, up and download speeds. Server storage space.
* The ability to access information and connect to the DMV to create tests and study material.
* Time restraints and deadlines.
* Software changes during development.
* Multiple platform compatibility if a mobile app is created instead of using the devices 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.*

