# 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?*

* This project is for our client DriverPass. The purpose of this project is to create an online platform that allows drivers to take online driving classes and practice tests to improve drivers’ ability to pass the driving test.
* The company strives to produce more efficient training and driving training.
* DriverPass also wants the system to allow users to register for driving lessons in person through various packages.

### 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?*

* The client DriverPass wants the system to help them access their data online from anywhere, download data reports, and allow users to schedule and reserve driving appointments with different package options.
* They also want clients to be able to take practice tests and take online classes to fix the problem of failing driving exams.
* The system will be a web application connected via the internet and will utilize a cloud system to avoid backup and security issues.
* The system will also need to be updated with proper DMV education and policies, so they want to receive notified updates.
* The system should also display a user interface displaying test information, driving notes, and customer info.

### 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 allow users to sign up or call to sign up for an online account to access the website
* The system should be able to present a user interface for the user displaying the correct information.
* The user should be able to sign up for online classes and take practice tests to study for driving exams
* The system should allow users to schedule driving lessons and appointments with various packages
* The system should also track user data and allow access to data to specified individuals of the company and be accessed from anywhere with internet access.
* The system should also allow DriverPass with full access to customer accounts to be able to reset passwords and such.

## 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 Environment for this system should be accessible online via web-based application and not need to be manually backed up and needs to be ran over the cloud for storing and transferring data
* The system should be able to run fast due to constant interaction between servers. There will be a lot of activities going on in the website such as online courses being streamed as well as students taking practice tests. People also must be able to sign up and register for classes and practice tests as well as register for driving lessons. This will require a system that runs at high speed and quality. This data will need to be presented and queried to users at a fast rate.
* The website will need to be updated frequently due to new driving regulations and if users update their accounts or cancel exams and lessons, the system should be able to account for this. Information should be stored in a database and be updated as needed with frequent updates.

#### 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 needs to be run off an internet-based application such as safari, Microsoft edge, google. I recommend using windows because it has a graphic and easy to use interface. Windows also provides the tools to host web applications which will make it easier to integrate.
* The application should be developed as a web-based application. This will ensure users can access this through computer and will need a database for storing user information.
* The backend tools required would be a database to store and track information. Customer data, reservation data, and online course and practice test data should be accounted for in a database to be able to store and query information as needed. The information should also be able to be updated by administrative users. The backend will utilize several languages such as HTML, CSS, JavaScript, and some sort of database, maybe Microsoft SQL server because its more enterprise based

#### 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?*

* Different users will have different logins. Logins must be unique in the system and passwords should be unique as well. No user should have the same username and password to distinguish individuals from each other.
* The user will most likely sign in via email which makes it easier or some unique username.
* The admin should be notified of database connection loss or the system connection loss. The admin will be notified if the system is malfunctioning or missing connections and it should be immediately or close to it.

#### 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?*

* Yes, the system should allow users to update and edit their account information. The employees for the company with an admin role should be able to access user accounts and make the necessary changes needed.
* The system should utilize a database that is frequently backed up and updated with the necessary information.
* The IT admin should be able to view customer accounts and access them. They should also be able to create and manage employee accounts including access roles in the company. IT admins should have control over who is assigned certain roles from user to admin.

#### 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?*

* Users should create a username and password to login and can retrieve their password securely via “Forgot Password”. Users should have to input their email and maybe have a phone number verification to ensure it’s them.
* The system should utilize HTTPS, This encrypts the information between the client and the server so no sensitive information is lost or accessed without permission. Use API keys or tokens to validate requests.
* If there were a brute force attack, there should be a limited number of attempts that a user tried to access the account. Also track failed attempts by IP address per user account

### 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 deliver content to the user in readable forms
* The system shall display a quality user interface to allow customers to interact with the website
* The system shall display content in a legible way via pdf, csv, or Json.
* The system shall allow users and employees to create accounts and access them.
* The system shall allow users to view completed courses and test scores.
* The system shall users and employees to make driving reservations and schedule them properly.
* The system should give notice of driving lessons to employees and customers
* The system should also display the designated driver and inform the driver that they will be instructing for that day
* The system should allow users to access and purchase package deals from the online platform.
* The system shall display their profiles to users when requested as well as online courses with content.
* The system should be connected to the DMV for regulatory updates on the latest driving information.
* The system shall display user progress in the courses as well

### 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 needs to be easily accessible and easy to navigate .
* The user interface will be based on their roles and what access they have.
* The customers should be able to track progress, view their information, take driver notes, exams, courses, they will also be able to purchase packages and register for driving lessons in person.
* The IT admins should have access to all accounts in case of lost passwords and deleting accounts from people who don’t use the system anymore. They also need control over who gets access to what will be their major role. They should also be able to manage the system and account for errors in the system
* Employees should be able to help customers create accounts, input their information, and manage driving lesson schedules
* The company owner should also have access to reports for active users, and driving schedules
* The interface should adjust to the device size or screen size so this should be a dynamic feature. This will allow users to access the application from multiple devices.

### 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 need a device to access the platform
* Users will need internet access
* Users will need proper login credentials and methods to access the platform
* The user will be able to navigate the platform

### 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?*

* Limitations would be internet because without internet access the application will not function
* Compatibility issues, some clients may not be able to access this platform from anywhere
* Technical issues in the system such as bugs that can’t be fixed right away.

### 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.*

