# 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?*

* Our client, Liam, is the owner of DriverPass
* Liam found out that around 68% of learners who take their driver’s test fail because they only practice previous exams.
* Liam wants to create DriverPass to help drivers pass their driver’s test.
* DriverPass will have online practice and exams, as well as provide in-person, on-the-road training.
* Ian is the IT officer of DriverPass

### 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 wants to provide learners with online classes and practice tests, as well as provide on-the-road training, to help drivers pass their driving exams.
* The system must allow Liam to access the data online from any computer, as well as download information when offline.
* The system needs to provide role-based access control to maintain security.
* Must be able to see who made a reservation, who cancels one, and who modifies it. Should be able to print an activity log where all this information is accessible.
* Customers need to be able to make a reservation for a driving lesson from their account or by calling online.
* Must be able to track which driver is scheduled to go out with which instructor and car, and at what time.
* System needs to get notifications from the local DMV to ensure tests and practice are up to date with local standards.
* System must run off the web, preferably the cloud.
* System should have an easy to use and easy to navigate user interface that includes online test progress, information, driver notes, special needs, driver photo, and student photo.

### 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 needs to be able to provide online practice and on-the-road experience to customers.
* Users should be able to pick between three separate packages. Package One is 6 hours in a car. Package Two is 8 hours in the car and in-person lesson explaining the DMV rules and policies. Package Three is 12 hours in a car, a lesson explaining DMV rules and policies, and access to online classes with learning material and practice tests.
* Users must be able to register for lessons. Can call to make an appointment or register online using their account. Must provide information such as first and last name, address, phone number, state, credit card number, expiration date, security code, and pick-up/drop-off location.
* System must be able to keep track of when a customer has a lesson, and at what time, with what instructor, and in what car.

## 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 needs to be web-based, preferably over the cloud.
* An application may also be beneficial down the road to allow the service to be more accessible to those using a mobile device.
* The system will need to run smoothly and fast. There should be no bugs and should be built to handle many users as once. There will be different types of users, such as learners, instructors, IT, and administrators, and each of these users will have different roles. Each user should be able to access their specific content with ease.
* The system needs to be updated any time there is a change in the policy, rules, or sample questions given by the DMV.
* The system will also need regular security and performance updates to keep it working.

#### 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 being able to run of different platforms would allow it to be more accessible to a wider audience. Popular platforms like windows, Unix, Chrome, Mac, and Android would be good choices for platforms that should be compatible with DriverPass
* The Back end will require a database to store all the user information and data.
* Database will also house information for sample questions and educational content, as well as driver, instructor, and admin information.

#### 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?*

* Before entering the site, users will need to enter their username and password.
* The username and password will be case-sensitive to ensure that each entry is unique per user.
* When entering information about registration, such as first and last name, address, credit card number, expiration date, and a pick-up and drop-off location, this will all need to match the information entered in the database.
* Registration information will also need to be case-sensitive.
* If a user forgets their username or password, then they can try to reset it on their own.
* If a user false attempts this information three times, or is unable to reset it on their own, then a notification will be sent to admin to help with the situation.

#### 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 IT admin will need special role accesses to the system to be able to add, remove, or modify users.
* Customers should be able to create their own account of modify the information within their account without changes to the underlying code.
* The system will need to adapt to platform updates. Updates should be done at night or on occasions where not many users will be on the system.
* Updates should, when able, be done in parts so that users can still access the site.
* Certain system updates will need to change the underlying code.

#### 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 will need to enter their correct, case-sensitive username and password.
* Encryption can be used to secure the connection of data exchange.
* In the case of a brute force hacking attempt, the account should be locked from all users and a notification should be sent to administration.
* If the user forgets their passwords, they should be able to reset it on their own.
* If the user is unable to reset their own password, or repeatedly enters in the wrong password, then they will need to contact IT for help in accessing their 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 match up the user’s information with their login information to ensure they are being provided with the accurate information.
* The system shall be cloud, web based.
* The system shall provide up-to-date practice exams and questions.
* The system shall track the registration of drivers, such as when they have lessons, with which instructor, and in what car.
* The system shall allow users to register for lesson packages.
* The system shall accept payment information, such as credit card number, expiration date, and security code.
* The system shall have an interactive interface for users to look up their information, test progress, and instructor notes.

### 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 easy to navigate and use.
* The interface will include the online test progress, student information, special needs, driver notes, driver photo, and student photos.
* The different users of the interface include the learners, instructors, and administration.
* The learner will need to be able to access online tests and content, as well as the driver feedback.
* The instructor should be able to view the driver information, as well as update the driver notes and feedback.
* Admin and IT members should have access to the entire interface, as well as the backend portion of the system. They should be able to edit information.
* Users should be able to access this interface both on a browser or a mobile app.
* A browser can be used with a touchpad or mouse. A mobile app can be used with a touchscreen.

### 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 to have access to the internet to be able to access the system.
* Users will have a device that is compatible with the operating platform of DriverPass and will be able to access all of its functions.
* The site will be able to handle hundreds, or even thousands, of users every day.

### 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 service will not work if the user is not connected to the internet.
* The time and budget will be limited to whatever the client is willing to spend at this time. If additional features are wanted but the resources are not available at this time, then they can potentially be released during a future update.
* The user’s device will need to be current enough to work with the system. If the device is too slow or outdated, then this will compromise the performance of the service on that device.
* If the DMV fails to update their standards, or notifications are not sent to DriverPass, then the system may be providing learners with outdated sample questions and educational material.

### 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.*

A screenshot of a calendar

Description automatically generated