# 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?*

* Client is DriverPass. The owner of DriverPass is Liam. DriverPass IT officer is Ian.
* Purpose of the project is to provide driver training by using online classes and practice tests. The company will also provide on-the-road training if requested.
* Customers of DriverPass will be able to reserve time and day when they want to take their on-the-road training.
* Reservations can be made by the customer online using their personal account or by calling the office to schedule an appointment.
* System should stay connected to the DMV for notifications for updates on new rules, policies, or sample questions.

### 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 the system to be able access and download data but cannot modify or update data unless online.
* Different employees at the company will have different rights and roles to the system.
* The system should be able to print an activity report for reservations that include: name of person who made reservation, name of person cancelling reservation, and name of person last modified reservation.
* Need the system to be able to track which user is matched up with a certain driver, time, and car.
* IT officer will be responsible for maintaining the system. Secretary can make appointments. User can make appointments, cancel, and modify appointments online.
* Owner of DriverPass wants to be able to disable a package.
* System needs to run off the web, preferably over 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?*

* Customer can choose from three packages when choosing a driving appointment:
  + Package One: Six hours in a car with a trainer.
  + Package Two: Eight hours in a car with a trainer and an in-person lesson where the DMV rules and policies are explained.
  + Package Three: Twelve hours in a car with a trainer, an in-person lesson where the DMV rules and policies are explained, and access to online classes with all content and material. Online class also includes practice tests.
* To register for a package, the customer will can call DriverPass or register online and give their information. This includes: first name, last name, address, phone number, state, credit card number, expiration date, and security code. As well as pick-up and drop-off location.
* Online test progress will show the tests the customer took, what tests are in progress, and what tests are completed. Tests will show name, time taken, score, and status. Status will be not taken, in progress, failed, or passed.
* Driver’s notes will show a table that includes: Lesson Time, Start Hour, End Hour, and Driver Comments.
* System will include an input form page where the student or secretary fills in the student information.
* System will include a page for contact information for the company and for the company to contact the student.

## 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?*

* System will need to be a cloud-based environment.
* System will need to run at a fast speed for the testing environments within the system.
* Since the System will be cloud based backup and security will be maintained by the cloud services. However, should be updated for all changes of rules, policies, and sample questions provided by the DMV.

#### 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 should run on any computer or mobile device. The platforms for this would be MAC, Windows, iOS, and Android.
* The backend will require a database for tracking reservations. This includes who made a reservation, who canceled it, and who modified it last.

#### 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?*

* To distinguish the different users, they will all require their own case-sensitive username.
* Each username will be unique, so no two users will have the same username.
* The system will inform the admin of a problem after three incorrect password inputs.

#### 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?*

* Only certain users will be able to add/remove/modify accounts without changing code. This will be determined by the company which employee will have certain rights and roles to do that.
* The system will be able to adapt to platform updates after confirmed by the IT officer.
* The IT admin needs full access for maintenance and modification of the system.

#### 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?*

* User is required to create a username and password to log in.
* Usernames will be case-sensitive and unique so no two users will have the same username.
* Passwords will be case-sensitive, at least 8 characters long, and must include a special character or number.
* Connection between the client and the server will be secured by SSL protocols.
* A notification is sent to the admin after three incorrect password inputs by a user.
* The account gets locked out after five incorrect password inputs by a user to deter against brute force attacks.
* If the account gets locked out or if the user forgets their password, they will have to contact the IT administrators for the system to confirm their identities to unlock/reset the users 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 provide online classes and practice tests.
* The system shall run from any computer or mobile device.
* The system shall track which user is matched with a certain driver, time, and car.
* The system shall be connected to the DMV and receive notifications whenever there is an update with new rules, policies, and sample questions.
* The system shall run over a cloud-based service.
* The system shall show the test progress of the tests the customer has taken.
* The system shall show any comments the driver leaves, as well as the times for the lessons.
* The system shall have multiple pages.
* The system shall validate user credentials when logging in.
* The system shall report invalid login attempts after three incorrect attempts.
* The system shall lock an account after five incorrect login attempts.

### 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.)?*

* Interface will have logo at the top center of the page.
* Interface will show online test progress of the user on the upper left-hand side of the user interface screen.
* Online test progress will show the customer’s tests in progress, and which are completed.
* Online test progress will also show the name of the test taken, time taken, score, and status of the test.
* Status of the test will be not taken, in progress, failed, or passed.
* Driver’s notes will be lower left-hand side of the user interface screen.
* Driver’s notes will show a table that includes the lesson times, start hour, end hour, and driver comments.
* User information will be on the upper right-hand side of the user interface screen.
* User information will show the first name, last name, address, city, state, zip code, phone number, and email address of the user.
* Below User Information on the right-hand side of the interface will show any special needs the user requires.
* A picture of the driver will be below Special needs to the left side of the right-sided column of the user interface.
* A picture of the student will be below Special needs to the right side of the right-sided column of the user interface.
* There will be a page where the student or secretary can fill in student information.
* There will be a page for contacting the DriverPass company.

### 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 username specifications of the user accounts were not specifically addressed.
* The password specifications of the user accounts were not specifically addressed.
* The security between client and server were not specifically addressed.
* What should happen to an account if there is a brute force hacking attempt was not specifically addressed.
* The system informing the IT admin of the system after three incorrect password attempts was not specifically addressed.

### 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?*

* Some students may get locked out from their accounts for a longer period due to having to contact the IT administrators.
* Some students may have difficulty contacting the secretary or IT administrators due to the employees working a day-shift schedule.
* Cloud-services may be more expensive for the DriverPass company.
* Program may take longer to create to run on both computer and mobile devices.
* System will go down if there are any disruptions to the cloud services.

### 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 picture containing timeline

Description automatically generated*