# 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?*

* DriverPass has noticed that student drivers have few options when it comes to getting prepared for their driving tests. DriverPass is determined to help increasing the pass rate of students taking their on-site examines.
* DriverPass wants us to develop a website that will allow students to take mock exams, as well as book driving lessons with the company.

### 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 to host practice exams and other driver education resources.
* DriverPass wants to address the issue of drivers failing their exams due to lack of resources.
* The system should allow for appointments to be made, changed, and canceled.
  + Appointments should include the pick-up and drop-off points.
* The system should allow for users to purchase different packages with different contents and price points.
* The system should force user to create an account with a unique ID.
* Users should be able to reset their password and update their account information if needed.
* The systems database should be secure and available online for the company’s employees.
* System should track the company cars and which driver is behind the wheel.

### 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?*

* Store user login information once they register over the phone
  + First, Last name
  + Address, state
  + Phone number
  + Credit card information
* Host online classes
  + Only accessible to certain users
  + Updateable practice tests for certain users
  + Notifies users when DMV rules and policies change
* Create specific roles
  + Admin/IT head
    - Able to access company information
    - Able to access and download data remotely
    - Ability to edit and remove ex-employee’s access
    - Ability to update and remove commodity packages
  + Secretary
    - Ability to register new customers into the system
    - Able to access the company’s schedule
    - Able to edit, remove and add appointments
    - Able to edit customer information
  + User/Customers
    - Depending on package
      * Access to online course
      * Ability to take practice tests
    - Ability to schedule and delete appointments
    - Ability to reset their password
* Ability to track the drivers and which cars they’re assigned to.

## 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?*

* Since the project is a website, it will be accessible for all platforms that have a valid internet connection and a browser.
* The system doesn’t need to be excessively fast because it will be a simple website.
* The website should be stored and backed up in the cloud to allow for remote access.
* The system should be updated frequently in regard to their security.
  + Updates should also be released upon the client making new requests.

#### 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 itself should run on a version of Linux that specialized in cloud-based storage and website management.
* The website should be accessible through most operating systems that support common web browsers.
* DriverPass has the option of licensing a third-party company to host their cloud database such as Microsoft Azure or Cloud SQL by Google.
* Another option is creating our own cloud data base.

#### 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?*

* Every user who decides to become a paying customer will then be prompted to create an account with the company. This will include a unique ID that will let them back into their account.
* The roles will be separated by customer and employee.
  + Customers will be then separated depending on what package they own.
  + Certain features will be locked behind paywalls if the customer doesn’t have the corresponding package.
* Any errors, user tickets, and website bug should be directed to the administrator so it can be addressed.

#### 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 administrator will be able to remove and modify a customer’s account per request.
* The Administrator will be able to remove packages he doesn’t want to sell.
* Any additional packages, features, or changes to existing packages will require changes inside the code.
* The system will be updated consistently with the most common platforms.
  + These will also include additional features for the website.
  + It is important that the current build of the website remains stable.
* Updates will be integrated in the cloud database.

#### 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?*

* For a user to log in they must present a correct username and password.
* All interaction happening between the user and the website will happen securely in the cloud.
* Brute force attacks can easily be prevented by adding a lock out feature that locks a user’s account after three attempts.
* If a customer were to forget their password or get locked out of their account, they will have to reset their password through their email.
* As an added measure, a two-factor authentication feature could be implemented.

### 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 will validate every user whenever they log in.
* The System will allow access to certain features depending on user’s credentials.
* The System will host multiple mock tests and driving ed resources.
* The system will allow for students to schedule, cancel, and update existing appointments.
* The system will track the instructors, student, and which car they are using.
* The system will show the customer and their driver a picture of each other
* The System will allow access to the company’s database remotely if you have the right credentials.
* The system will be stable and run at an acceptable speed.
* The System will warn the administrator of any errors, bugs, and issues with the website.
* The System will track a students test results and keep progress and suggest learning materials.
* The system will have an opt-in option for a more secure two-step authorization process.

### 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 will rely solely on the browser rather than the hardware.
* Laptops, phones, desktops, and tablets will be the majority of the user base.
* Customers will be able to log on and scroll through the website
  + They’ll have the option of purchasing packages.
  + Booking and updating driving appointments.
  + Viewing the practice exams and learning materials.
* Administrators will be able to access the company’s database and update the system.

### 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?*

* This document is written under the assumption that all customers have a valid internet connection and working internet browser.

### 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?*

* There is no known budget for the system. However, we assume that there is one. Operating this website with Linux is a great option because it is free and open source. I believe that the next limitation would be time. This app is simple in theory but will take a bit of time to fully build and start up.
* If the budget allows, I suggest licensing a company that hosts could databases and web applications.

### 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.*

