# 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
* DriverPass wants to build an all-in-one online system for drivers looking for assistance to pass their road tests
* The goal of the consulting company is to design a system for DriverPass that meets their needs

### 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?*

* Problem: Students often fail their DMV driver’s test
* DriverPass wants the system to provide students with the support they need to pass their road tests
* Supports online classes
* Offers practice tests
* Schedule on-the-road training via reservation
* DriverPass management has access to all data

### 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?*

* Management can access all the data whenever they are online
* Management has full access to customer and employee data
* Management can access data from desktop and mobile devices
* Management has some control over which driver packages are offered
* Students can schedule, modify, or cancel a training session with an instructor
* Students can take practice tests
* Students can take online classes
* The system is connected to the DMV for updates
* The system is a web interface with cloud-based servers
* The system stores: first name, last name, address, phone number, state, and their credit card number, expiration date, and security code for each user

## 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 indicated a web-based environment
* Client’s ideal scenario is having the website be hosted by a cloud service provider
* The system should be updated as soon as security updates are available
* They system needs to be able to handle a large amount of concurrent users
* They system needs to be able to update the website’s reservation availability in real time

#### 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?*

* Client indicated a cloud-based hosting service
* Security is important to the client so a platform like Linux is preferable
* The host environment is going to require a database to store the user information
* Another database to store the different offered packages
* Perhaps a different database to store the tracking information
* The backend must support administrator access to edit database information
* Cloud service provider handles backup and security

#### 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?*

* Each user is going to have a set of information that is unique to them
  + first name, last name, address, phone number, state, and their credit card number, expiration date, and security code
* This identifying information will be used to distinguish users
* The system should inform the admin if someone tries to create an account that already matches an existing account on the system
  + Ideally, the user would not be allowed to create a duplicate account
* They system should inform the admin if someone tries to create an account that has many similarities between an existing account but perhaps a different email or phone number.

#### 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 user should have the capability to edit their account details
* The system should have admin privileges that allow them read/write/modify access to account information in the database
* The admin should also have the ability to disable packages which should be able to be done without a code change
* The admin needs to be able to download reports of tracking information

#### 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 client indicated the stored user information would be:
  + first name, last name, address, phone number, state, and their credit card number, expiration date, and security code
* This would be what the user needs to register for an account, along with a password
* The password should only be allowed if it is strong and uses a variety of characters
* There should be a limit of how many attempts before a timeout and admin notification is sent which should prevent run-of-the-mill brute force attempts

### 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 track all reservations and store the information
* The system shall show the available training packages and allow users to reserve one of them
* The system shall store the first name, last name, address, phone number, state, and credit card number, expiration date, and security code for each user
* The system shall notify the admin’s when a new DMV regulation is posted
* The system shall notify the admin’s if a potential brute force attack is attempted
* The system should automatically be backed up
* The system shall be available on both desktop and mobile devices

### 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.)?*

* For students, the interface acts as a dashboard where they can view their progress and overview other items
* The interface should show completed, in progress, and upcoming tasks
* The status of each test needs to be displayed
* There will also be a section that has comments from the drivers listed for the student to see
* For a driver, the interface might present you with an entry portal that the driver would fill out
* The comments from the driver would then be piped into the student’s driver notes section
* For an admin interface, it might be helpful to see a specific student’s interface to help them when it comes to customer service.
* The admin interface should also make read/write/modify database entries streamlined
* The interface for the web browser on a desktop device should be straight forward.
* The design of the interface for mobile should be similar to the desktop version be better scaled and formatted for the smaller screen size and different aspect ratio
* The mobile interface should also be adapted for use with a touch screen

### 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 client said they wanted security to be important, but they did not specify what security measures they wanted to implement, nor did they specify what constitutes “secure enough” when it comes to the system’s security
* The security requirements listed in the security sections are assumptions/inferences based on the customer’s vague request for “security”
* The customer also did not mention anything about accessibility. The website should offer accessibility options for example offering translations for different languages

### 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?*

* One of the discussed limitations is that the system cannot be implemented in a way that allows the admin to add or remove package modules that are offered to students without a major development effort
* The client details a somewhat complex system for matching students with drivers, tracking the process at all times, and being able to post the feedback to the students’ account
* The client also wants to have tests and video lessons for students
* It may come out that the budget does not allow for all of these features to be implemented right away, in which case, the client would have to chose what features they want immediately
* Also, there’s a time aspect to all the features too, development for the tracking may take a while to get working the way the client wants. It may take longer than the client is willing to wait

### 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.*

