# 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 organization has been tasked by Liam at DriverPass to create a custom system for their use. The purpose of this system are as follows:

* To take advantage of a void in the market pertaining to the training for students who are going to take their driving test at their local Department of Motor Vehicles (DMV).
* Provide an online platform for training students to pass their written test.
* Provide a platform for scheduling students for driving lessons with an instructor provided by 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 wishes for the system to assist customer in gaining the education through online classes, practice tests, and in-person lesson so that they can pass the driving test at their local DMV.
* The problem is that there is an issue with 65% of individuals not being educated enough to pass their driving test at the DMV.
* The different components needed for this system are as follows:
  + IT and Administration:
    - A way the admin or IT department can control account access, track usage, and reset passwords.
    - A way for the owner, Liam, to use the system via the cloud to access important documents as well as to download and print data.
  + Secretary account:
    - A way for the secretary to create appointments taken by phone or from walk-in customers.
  + User accounts:
    - A way to access a user registration and be able to enter their information.
    - A way for users to take practice test.
    - A way for users to take online classes.
    - A way for users to schedule in-person driving lessons.
  + Drivers:
    - A way for instructors to log their notes during or after they provide students with a driving lesson.

### 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 objectives of the system are:

* The ability to create new users.
* Display the current packages offered by DriverPass.
* A way to purchase packages.
* Ability to create reservation.
* Ability to locate the information needed to contact DriverPass.
* Ability to set roles and limits for the different users of the system.
* Ability to make, edit, or delete reservations.
* Ability to print reports with the current progress of the student.
* Customers must be able to locate the contact information for DriverPass.
* Ability for users to reset their passwords automatically.
* A function to disable or enable packages.
* A function to download or print reports.
* Ability to be ran off web, in the cloud.
* Ability to receive updates from the DMV.
* A function to disable packages offered.

When completed this system should:

* Be able to create new users with all the correct information needed to do so.
* Be able to display the current packages offered and a way for the user to purchase these packages.
* Be able to set user roles and limits.
* Customers must be able to find the contact information for DrivePass to make reservation.
* Secretary must be able to input new customers and reservation.
* The system needs to have a way for users to make or edit reservation, student tracking, and be able to print an activity report stating the progress of the student.
* The system needs to have at least a Contact page for the student and DriverPass, a progress or home page for the student, a page that the customer can input their information to create a user account, and a way for the secretary to input customer information and reservations.
* It needs a way for users to be able to reset their passwords automatically.
* It needs to receive updates from the DMV website on any rule, policy, or sample question changes on the DMV website.
* The system needs to have a way of disabling packages if they no long want the ability for a user to register for it.
* Liam needs access to the system from home or elsewhere to be able to download reports or work on information.
* Lastly it needs to be ran off of the web, preferably over the cloud.

## 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?*

* This system shall be a cloud-based application.
* The system shall not have more than a 2 second delay between the user command and the systems response.
* The system should be able to handle many users at the same time without significant degradation to performance.
* The system shall be updated with current information every 15 minutes, or immediately if a session is booked.

#### 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 shall have the ability to run on multiple platforms as well as mobile due to not knowing what the users may have access to.
* A database such as MySQL shall be required to store Login information, user profiles, and course materials.

#### 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 when logging in for the first time will be able to create a unique user ID.
* The users ID and password will be case-sensitive.
* The admin will be notified of a problem in real time when a user encounters an unknown system error, if the data base is not functioning, or if an authorized user submits a “help” request.

#### 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 system shall allow users to add, remove, or modify their personal information and appointments without changing the code.
* The system shall allow Liam to enable or disable current packages.
* The IT admin needs access to user login information to help reset user passwords in the case that the automatic password reset system is not effective.

#### 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 system shall require a unique user ID and at least a 9-character password that includes at least one uppercase letter, one number, and one symbol.
* The system shall require users to periodically update their password.
* The system shall be compliant with industry security standards, such as SSL encryption.
* The system shall protect against brute force attacks by only allowing 3 login attempts then locking the account until IT has been contacted to reset password.
* If a user forgets their password there will be a forgot password prompt where user can get a one-time code sent to their email on file. Once code is input correctly the user will be allowed to change their 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 allow users to log on with a username and password.
* The system shall store and retrieve customer information.
* The system shall notify users when a package has been purchased.
* The system shall generate receipts for when a package has been purchased.
* The system shall notify users when a session has been scheduled.
* The system shall allow administrators to create, modify, and delete user accounts.
* The system shall notify admins when a user’s role has been changed.
* The system shall update most current test scores.

### 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 easy to use for a first-time user.
* The UI must be consistent in font and layout of pages.
* The different users of the interface are the owner, the IT admin, the secretary, instructors, and students.
* The owner will need to be able to hide or unhide current packages.
* The secretary will need to be able to input new client information.
* The IT Admin will need to be able to access logs and metrics as well as assist in reset of passwords
* The clients will need to access their profile information and scheduling.
* Users will interact with the interface using a mobile device or a computer through a web browser.

### 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?*

* Specific page layout was not addressed above.
* Specific cloud provider was not addressed above.
* I am assuming that the IT admin will oversee helping with the rest of passwords.
* I am assuming that the users will not have access to one specific type of hardware.
* I am assuming that the users will not have access to one specific OS.

### 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 system will naturally be limited because it must be compatible with different hardware and operating systems.
* The budget is unknown.
* The time frame does not allow for revisioning if needed.
* A cloud database needs to be selected.

### 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.*

