# 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?*

* The client is Liam the owner of DriverPass and the IT officer Ian, are requesting a driving training program to help with training students to practice for their driving test via online classes as well as practice tests. They plan on using a system to book reservations with different learning packages.

### 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 an online based system that is integrated to the cloud. The client owner needs the system to have computer and mobile access to see the data online, as well as be able to download the reports and miscellaneous information for the client to get the ability to work from home. The system will have role-based rights for different employees, and the IT officer Ian will have access to revoke rights from. The system will also need a way to track reservations, cancellations and modifications. The reservations can be booked online, or they can call the client’s line, or visit the location, meaning the systems will have a map, phone number and a booking button. The clients would prefer to be hands off with backup and security.

### 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?*

* When completed the client would like to have a cloud-based web page. One of the pages will display the users test progress of the customer, basic information, the student’s photo and the driving instructors’ photo, as well as a notes page that shows the lesson information, such as start/end times of lesson and comments from the instructor. The system will have a reservation-based page to input information, to register. As well as a general information-based page which shows the different packages, the client’s office location and number. The project will be planned according to dependencies or importance, starting with a use case diagram and activity diagram. Then, have team members research a user interface design, while another member works on the class diagram. After we can show the work to the client for verification and approval, if accepted proceeding with the interface creation. A business logic will then be built to accommodate the other requirements, then we’ll test and deliver when the testing is good. We can then have a sign-off meeting with the client.

## 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 will be web-based, and need to be compatible with different web browsers, and mobile phones.
* The system must be responsive and have enough response time for upload and download to ensure that information flows between customer and server smoothly.
* The system will be updated on a regular basis, to ensure that security is up to date and there are no data leaks, with the regular updates we could also verify the integrity of the site and ensure that everything is running correctly, as well as updating information.

#### 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 be able to run on any web browser, whether it was a mobile phone browser or a computer-based browser, to maximize coverage for the customers.
* The system will need to have a database to store admin information, customer information, and scheduling dates.

#### 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?*

* Users will be distinguished using unique IDs tied to an email address.
* Passwords with case-sensitive inputs will also be implemented as another authentication value.
* The system will inform the admin and lock the login system from the user if the password and email address doesn’t match what’s in the system after a certain amount of tries.

#### 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 will have a profile created, and the information will be put in a database, and the changes on the profile will update on the database.
* The system platform adaptation will have a preferred version of its on a different platform but will be based off the main version.
* The IT admin will have access to the database to create, update, delete accounts, ensure that everything is running smoothly, and be able to report issues to the developers to ensure fixes are done for bugs.

#### 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 login will require an e-mail account and password for authentication that matches the information in the database, if no record exists, user needs to create an account.
* The data exchange will be secured by having a multi-authenticated login, and we will have a secure cookies and tokens, and since we have a web-based system, we can use the HTTPS protocol, lastly, we can ensure that we are monitoring the connection and posting updates.
* If the system is being brute forced, the system will lock the account and notify the user, and admin.
* If the user forgets their password, we can send a message via their e-mail or phone, or whichever preferred communication method they prefer to get a password reset.

### 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 for customers.
* The system shall provide access to offline data to the admin.
* The system shall have different platforms, use an internet connection, and be web-based.
* The system shall have a tracking system for customer reservations/cancellations/modifications.
* The system shall have a verification system for users via login.
* The system shall show a booking process for training and practice, with different packages.
* The system shall notify the customer and trainer of any bookings.

### 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 be web-based and will have different pages and be able to navigate through the system.
* We will have two users for the interface, the customer and the admin.
* Each user will have different views and editing rights.
  + The customer and admin will essentially have the same view, but the customer is limited in updating certain forms and minimal access to the system other than what’s provided for them. The admin will be able to check and have access throughout the whole system.
* The interface should be built to update between mobile and browser view, but still show the same information, and the data will be from the same server so that the customer will have access regardless of platform used.

### 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 actual security was not addressed in the system, we have check and balances such as login authentication and secure connectivity, but in what way are we fully keeping it secure. Another assumption would be how we can keep the system updated for future proofing, since technology is also evolving, so that we don’t fall behind.

### 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 design will have constraints regarding connectivity since customers are only able to create and get access with an internet connection.
* A user also needs access to either a computer or mobile device that has a web browser.
* Resources, time and budget will be based on the client’s requirements, though negotiable ultimately all those depends on how the client wants the system to be shipped and be ready. As for technology, as long as they have a mobile device or computer that has web browser access, we can ensure that we aren’t limited there.

### 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 computer

Description automatically generated*