# 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 purpose of this project is to fill a need for better driver training for students preparing for their driving test at their local Department of Motor Vehicles.
* The client is DriverPass.
  + Liam, Owner
  + Ian, IT Officer
* The system will enable students to take online classes, provide access to practice tests, and give them the option to sign up for on-the-road training.

### 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?*

* The system will help decrease the amount of people failing the driving tests at their local DMV.
* The system will be connected to the DMV and receive updates.
* Customers can take practice exams and answer sample questions.
* If customers choose in-person training, they will be matched with a driver trainer.

### 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?*

* Display driver notes, test progress, student information, and student/driver photos.
* The system will allow customers to opt-in for in-person driver training.
  + Customers will be able to select one out of three packages offered.
    - **Package One**: 6 hours in a car with a trainer
    - **Package Two**: 8 hours in a car with a trainer, an in-person lesson where DMV rules and policies are explained.
    - **Package Three**: 12 hours in a car with a trainer, an in-person lesson where DMV rules and policies are explained. This comes with access to an online class with all content and material available, including practice tests.
  + Customers will be able to provide a pickup/drop-off location.
  + Customers will be able to identify the driver trainer they are matched with
* Employees will be able to access the system remotely depending on their role.
* The system will be connected to the DMV to ensure DriverPass is always current with:
  + Rules
  + Policies
  + Sample questions
* There will be tracking capabilities for reservations, cancelations, and modifications for appointments.
  + The system will allow employees to print activity reports.
* Customers can automatically reset their password in the event they forget.

## 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 must be accessible from a web browser, served from a cloud.
  + This includes desktop and mobile browsers.
* The system will need to be fully functional when the cloud server has a high amount of traffic.
  + All required processes should be executed within 4 seconds or less.
* The system needs to always be connected to the DMV in the case there are changes to the current rules, policies, and sample questions.
* The driving packages must be customizable and there needs to be the ability to add or remove packages.

#### 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 served from a cloud environment so that the system can be run on any platform that supports a web browser including mobile devices.
* The system will be fully reliant on the cloud for updates and security.
* A database for the system will be linked to the interface.

#### 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?*

* Customers will need to register for an account online or the receptionist can create an account for them if they call or visit the office.
* Employees and the owner will have to log in to a back office.
  + The level of access an employee has will be dependent on their rights and roles.
* Input is case-sensitive especially for passwords to ensure optimal security for users.
* In case a problem occurs, a printable activity report will be generated for the owner.

#### 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 IT admin will have full access over, and make changes to, all registered accounts without changing the code.
  + The IT admin will be able to assist internal users that forgot their passwords.
  + The IT admin will be able to block access to employees that are no longer with the company.
  + The IT admin must be online to make these modifications.

#### 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?*

* A user must log in using their email address and a password.
* If a customer forgets their password, they can automatically reset it on the website.
* Authentication can be handled with the use of an SSL, allowing web browsers and servers to communicate.
  + Data is encrypted before being sent and then decrypted upon receipt.
* To prevent “brute force” hacking attempts, users are required to use a strong password with a combination of characters, numbers, and symbols.
  + If a problem occurs, a printable activity report will be generated to help identify who is responsible.

### 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 authenticate user credentials when logging in.
* The system shall display the correct customer information on the dashboard upon a successful log in.
* The system shall track reservations including cancelations and modifications.
* The system shall track online test progress, scores, and times taken.
* The system shall allow drivers to create, edit, and delete drivers notes.
* The system shall display special needs related to the user when logged in.
* The system shall allow customers to register for one of three driving packages.
* The system shall display the correct driver and student photo when the user is logged in.
* The system shall accept and store student information from forms.
* The system shall automatically update practice tests when the DMV has updates.

### 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 will act as the dashboard for logged in users. It will display their personal information which they will be able to keep up to date (address, email, phone number). The interface will keep track of their progress as they go through the online tests that are available. If the customer makes reservations for road practice, they will be matched with a driver. The driver’s photo as well as the customer’s photo will be displayed. The customer will be able to review other information including the lesson time, start hour, end hour, and driver’s comments.
* The different users for the interface are the customer, receptionist, driver, IT administrator, and the owner.
* Each user will have different levels of access.
  + The user will be able to take tests, change personal information, upload an image, and make reservations.
  + The receptionist will be able to create a new user account for the customer if they call or visit the office.
  + The driver will be able to see who they are matched with when a customer registers for driving lessons and upload their comments.
  + The IT administrator will have access to all accounts to make necessary modifications.
  + The owner will have access to all accounts, download reports, and be able to add and make changes to driving packages.

### 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?*

* Customers will at least have access to a mobile device capable of connecting to a web browser.
* Customers that are registered for driving lessons will live within an acceptable range from the office.
* Customers that are registered for driving lessons will not need a translator to communicate with the driver.

### 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 client does not have a developer or a system analyst to add or remove modules in terms of their driving packages.
* The client will rely on the security of the cloud and focus solely on the business operations.

### 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.*

*Timeline

Description automatically generated*