# 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?*

* To help people pass their driving tests at the DMV, the owner of the business (Ian) wants to find a way to help train students for driving tests by offering not only on-the-road instruction but also online classes and practice exams.
* He also wants to make it as easy of a process as possible – for example, giving the students the ability to create accounts and resetting their password if forgotten, check their cognitive driving progress, and more.

### 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 must allow users to access data from any location online. Microsoft Office 365 would be preferable because it allows users to edit documents online.
* The system also needs a developer to edit modules, and the ones editing should be monitored.
* When it comes to security, we have people in the team that can take certain roles in that regard; Much like Ian will be the one who can block access to users or help them get their information reset.
* Users must have the ability to set up appointments/reservations for driving lessons and cancel existing ones if needed. – The appointments can be made in three different package deals, each would be unique, having a longer hour time and different interactions with trainers.
* All these rules and appointments should meet the DMV requirements.

### 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?*

* Users should be allowed to choose between package 1, 2, or 3.
* Users should be able to schedule a reservation by phone call, online, or in-person.
* We need to transfer Ian’s ideas to developers or appropriate roles so they can work on user interface designs to get this project in order.
* We also must build activity and class diagrams.
* We have to make a GANTT chart for documentation purposes.

## 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?*

* Load times should be 1-2 seconds
* System should provide feedback for load times over 3 seconds to ensure a smooth user experience
* System updates should occur once a month or as needed to ensure the system remains up to date/secure
* Updates should be tested thoroughly to ensure no disruptions to the system

#### 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?*

* This system should be designed to run on a web-based platform, accessible through Internet Explorer, Edge, Google, Firefox, and mobile browsers.
* A database is needed to store user and system data.
* A web server (and software for it) is required to process requests and manage responses.
* A robust database management system (DBMS) such as MySQL or PostgreSQL would be ideal for storing and managing user and system data.

#### 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?*

* It will have separate login sections for customers and employees to ensure secure and personalized access.
* Each user will have their own unique login credentials, with separate access levels and permissions.
* Passwords for each user will be case-sensitive.
* The system will automatically notify the administrator daily of any problems or issues that may come up.

#### 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 should be capable of performing updates, without requiring manual intervention.
* User changes, such as adding, removing, or modifying user accounts, can be made without altering the underlying code.
* The IT administrator requires access to the database and web server to perform maintenance and make changes to the system such as:
  + Update and manage user accounts
  + Monitor system performance and troubleshoot issues
  + Apply software updates and patches
  + Configure system settings and parameters

#### 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?*

* Users must have a valid password to log in to the system.
* The password is required for secure authentication and access to the system.
* User authentication provides an additional layer of security for the connection or data exchange between the client and server (via email, or phone).
* If a user attempts to log in incorrectly a set number of times, their account will be locked out as a security measure against brute force hacking attempts.
* The "Forgot Password" button allows users to reset their password if they have forgotten it – if admin allows.

### 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, including username and password, upon login.
* The system shall provide a password reset feature to aid users who have forgotten their login credentials.
* The system shall create user accounts with associated profiles, enabling easy identification and management of individual users.
* The system shall maintain accurate and up-to-date records of user information, including customer data and lesson progress.
* The system shall present customers with a selection of packages and services to choose from.
* The system shall allow customers to browse and select packages, with the system updating their profile accordingly.
* The system shall provide customers with access to online learning tools and resources.
* The system shall enable administrators to manage package availability by disabling packages when they are fully booked.
* The system shall display notes and feedback from drivers, providing valuable insights for improvement.
* The system shall provide administrators with detailed information about lessons, including start and end times.
* The system shall synchronize with DMV databases to ensure accurate and up-to-date information.
* The system shall display driver and student photos, helping to establish a personalized connection.

### 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.)?*

* Users will interact with the interface through a web browser on computers, mobile devices, or other compatible devices.
* Users include:
  + Customers
  + Employees
  + Administration
* Customer Requirements:
  + Secure Access
  + Personalized Hub
  + Learning Insights
  + Results Reporting
  + Profile Management
  + Lesson Planner
  + Package Navigator
  + Knowledge Base
  + Support Center
* Administrator Requirements:
  + Data Insights
  + Package Provisioning
  + Driver Matching Algorithm
  + Secure Authentication
  + Customer Profile Management

### 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?*

* Admins will be equipped with the necessary skills and training to efficiently manage the system and provide timely support.
* To ensure seamless experiences, customers will receive timely reminders and notifications to confirm their scheduled sessions and arrive prepared.
* Drivers will be held to a high standard of reliability.

### 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?*

* Only a limited number of cars are available for use.
* Users may not have experience with all types of vehicles.
* The system may not have the capacity to accommodate an overwhelming number of users.
* The budget for the system may be limited.
* The budget for the system may not be sufficient to cover unexpected expenses or issues that arise during development.

### 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.*

[Insert chart]