# 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 clients are Liam and Ian, with DriverPass. They want to offer online practice exams as well optional on-the-road training for students that are interested in better training before taking their driving test

### 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?*

* They noticed the need for better ‘driver training’ since many students fail the driving test.
* They want students to be able to create online accounts on their website and take online practice exams that prepare them for their actual driving test.
* They offer an optional ‘on-the-road’ training with designated instructors

Key Components:

* Administration – System admins can manage user accounts, track progress, and generate reports
* User Accounts – Students register their account, take practice exams, and schedule driving lessons
* Secretary – They manually schedule lessons for students who come to the office or call in rather than registering online.
* Driver – Instructors can see their schedules, assigned students, and provide feedback.

### 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?*

Admin:

* Track any data that is added or modified can be done on a computer or mobile device and have the ability to save the reports for offline viewing.
* Full access to all accounts so they can reset passwords if needed, disable registration for ‘packages’ when necessary, and the ability to track who made a reservation, modified it, or canceled it.
* Manage all training material and ensure it up-to-date with state DMV compliance

Student:

* Students can register online, on the phone, or in person.
* They can choose what training packages they want (i.e. practice exam or practice driving)
* Students can review their scheduled training and see their instructor and vehicle
* Users should have the ability to securely input and/or reset their login credentials if necessary.

Instructor:

* Driving instructors can see their assigned lessons for the day (students, time, vehicle)
* Instructors can upload feedback and track their students progress.

## 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 needs to be web-based as it can be hosted via cloud to further support cross-platform.
* The system needs to be able to withstand multiple users accessing the webpage without crashing (can be supported by an Elastic load balancer over multiple instances– deploys traffic to other instances to stabilize the system)
* Response time must be 1 second or less.

#### 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 hosted on cloud services (can be accessed from any OS that has access to cloud)
* The system needs to be accessible for all different devices – Laptop/desktop, smart phone, tablet, etc.
* A database will beneficial to properly store user login and authentication, as well as any packages or modules.

#### 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?*

* Students information (first/last names) needs to be grammatically correct once input.
* Test scores, feedback, and lesson progress needs to be should be reliable and valid.
* Admins should be informed if multiple failed login attempts occur or once compliance reports need to be updated.

#### 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 systems foundation is intended for future scalability.
* Admins must have the ability to add and disable training packages when necessary.
* IT admin needs to have access to any databases that stores user credentials in case of a login issue; and to any database that contains different packages that can be used in future updates.

#### 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?*

* Role-based access for user enhances authentication by adding an extra layer of security.
* Users need to be able to reset their password from their end.
* Log tracking is crucial to review who and what changes were made to the system.

### 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 register, book, modify, and cancel any appointments.
* The system shall allow users to login via role-based access, providing different permissions for admins, secretaries, students, and instructors.
* The system shall provide account recovery/password reset in case students forget their credentials.
* The system shall integrate payment processing so students can purchase different training packages.
* The system shall allow administrators to disable/enable packages when necessary
* The system shall allow administrators to review the logs and see who made changes to the system.
* The system shall update training materials regularly to maintain compliance with DMV protocols and regulations in real time.
* The system shall allow the driving instructors to check student schedules and upload feedback and progress reports.

### 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 system needs to be a cross platform, web-based application that can be accessed from different devices (mobile, desktop, tablet)
* The overall interface needs to be easily navigated and simple accessibility to the online exams, scheduling, and other settings.
* Students should receive notifications for any updates or changes to their exams, lessons, or accounts.
* Students – need to have a dashboard that displays current progress, test scores, upcoming exams or driving lessons. Additionally they should be able to see a list of available times and instructors so they can schedule their lessons.
* Secretaries – must have an overview of the booking interface to manage or modify any walk-in appointments or phone reservations; can view basic customer details.
* Admins – must be able to the monitor any activity on the system; users, transactions, compliance, and security
* There should be a visual display to contact support if any issues are encountered (i.e. Chatbot, CS support number)

### 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 have basic internet access where they can take online practice exams and schedule lessons
* States DMV will provide compliance reports that can be updated in real-time
* Employees will have basic knowledge or trained to posses the required knowledge to use the system

### 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?*

* Users cannot modify data offline to prevent inconsistencies (Read-only access/downloads)
* Adding new training packages will require a developer to modify the system; which can be time consuming with a smaller development team.
* Encouraging a cloud-hosted application can be costly or limited to features depending on what tier the stakeholders acquired (Free, Business)
* User devices – If users have outdated devices or OS, they may struggle to register online or access the webpage.

### 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 project management

AI-generated content may be incorrect.*