# 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 goal of this project is to build a website and system for a company called DriverPass.
  + A lot of people fail their DMV driving tests, and DriverPass wants to help fix that.
  + They want to give students better training, both online and in person.
* The system will let students:
  + Sign up for driving lessons
  + Take practice tests and classes online
  + Pick packages that fit what they need
* The system should also help the company with stuff like:
  + Managing users
  + Keeping track of lessons
  + Seeing reports and who did what
* The system should work on phones and computers.
* People who work there will have different levels of access, depending on their job.
* The software needs to be safe, easy to update, and ready to grow if the company gets bigger.

### 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?*

* Many people are failing their driving tests because they aren’t well prepared.
* There aren’t many good or affordable ways to learn both driving rules and actual driving.
* DriverPass wants to fix this by offering:
  + Online lessons and practice tests
  + In-person driving lessons with trained instructors
  + Training packages that mix online stuff with real driving time
* The idea is to make one simple website where:
  + Students can sign up, pick a package, take practice tests, and book lessons
* Staff members (like secretaries and IT people) will be able to:
  + Manage appointments
  + Help users
  + Track who’s doing what with reports and tools in the system

### 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?*

Let students create accounts and log in easily

* Make it simple for student clients to pick and buy a training package
* Allow students to:
  + Schedule driving lessons
  + Take online classes and practice tests
  + See their test scores and progress
* Give secretaries a way to:
  + Book, change, or cancel driving appointments
  + Add student info when they call in
* Make sure instructors can:
  + See their schedule
  + Add notes after each lesson
* Help the IT guy manage stuff like:
  + Resetting passwords
  + Blocking accounts if needed
* Let the boss see:
  + Reports about who did what
* Lesson history
* Test results and booking activity
* Keep everything safe and secure
* Make sure the system works on phones, tablets, and computers
* Be ready to update training packages or add new ones later\
* Show alerts when the DMV updates rules or test questions

## 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 work on the **web,** so students and staff can use it from **any computer or phone** with internet.
* The app should offer an offline mode, so students can download study materials and review lessons even when they are not connected to the internet and for app admin to download reports.
* The system should be**fast** , pages should load in **2–3 seconds or less.**
* It should be available **24/7** with **very little downtime** (only for important updates).
* Updates should happen **regularly**to fix bugs, improve features, and keep up with **DMV rule changes.**
  + DMV updates (like new test questions or rules) should be added **right away** when they're available.
* The system should be hosted on the **cloud**to make it easy to access and keep secure.

#### 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 work on any platform since it is web-based. That means it should work on Windows, Mac, iOS, Android, and more.
* Users should be able to use common web browsers like Chrome, Safari, or Firefox.
* The back end needs a database to store user information, test results, lesson schedules, and reports.
* It should use a cloud-based server so the company does not have to manage or back up data themselves.
* The system should be built with common tools that make it easy to update and maintain, such as a SQL database, a secure backend, and a user-friendly 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?*

* The system will use unique usernames and passwords to tell users apart.
* Passwords and usernames will be case-sensitive to keep accounts safe.
* When a user enters incorrect login info too many times, the system will notify the admin.
* If there are problems with appointments, like double bookings or cancellations, the system will alert the admin.
* Any system errors or failed data updates will also be reported to the admin right away.
* The system will keep track of who made changes and when, so it is clear who did what.

#### 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 will let the admin add, remove, or change user accounts without needing to change the code.
* It should be flexible enough to handle updates from different platforms like new browsers or devices without breaking.
* The IT admin will have full access to manage user accounts, reset passwords, block users, and fix problems.
* The system will be designed to get automatic updates or patches to stay compatible with new technology and security needs.
* In the future, the admin might be able to disable or enable training packages without needing a developer.

#### 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 need a username and a strong password to log in.
* The system will use secure connections like HTTPS to protect data sent between the user and the server.
* If there is a “brute force” attack (many wrong password attempts), the account will be temporarily locked, and the admin will be notified.
* If a user forgets their password, they can reset it automatically through a secure process, like receiving a reset link by email.
* If the reset link fails, the app’s admin can re-enable the account or change the user’s password manually.
* All sensitive information, like credit card details, will be encrypted and kept safe.

### 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 and create an account with personal and payment information.
* The system shall validate user credentials when logging in.
* The system shall let users reset their passwords automatically through a secure process.
* The system shall allow users to browse and select from different training packages.
* The system shall enable users to schedule, modify, or cancel driving lesson appointments online.
* The system shall allow the secretary to schedule or change appointments on behalf of customers.
* The system shall match each driving lesson with a specific driver and car.
* The system shall track and record user activity, including reservations, cancellations, and modifications.
* The system shall provide drivers with a way to add notes and comments about each lesson.
* The system shall display online course progress, showing tests taken, scores, and statuses.
* The system shall support role-based access, giving different permissions to admins, secretaries, drivers, and customers.
* The system shall notify admins of security issues, such as multiple failed login attempts.
* The system shall store all sensitive data securely and encrypt credit card information.
* The system shall allow admins to disable or enable training packages.
* The system shall integrate with the DMV to receive updates on rules, policies, and practice tests.
* The system shall allow admins to generate and download reports for analysis.
* The system shall run on web browsers across different devices, including mobile phones and computers.
* The system shall allow offline access to downloaded reports but restrict data updates to online mode only.

### 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 needs to be easy to use and clear for all users.
* Different users include customers (students), the secretary, drivers, IT admin, and the company owner.
* Customers need to be able to create accounts, browse packages, take online tests, and schedule or change driving lessons.
* The secretary needs to manage appointments, update customer info, and handle phone or in-person scheduling.
* Drivers need to view their lesson schedules and add notes or comments after lessons.
* The IT admin needs full access to manage users, reset passwords, and control system settings.
* The company owner needs access to reports and system activity tracking.
* The interface must work on web browsers for both desktop and mobile devices.
* Users should be able to access the system from any computer or mobile device with internet.
* The design should include progress tracking for online tests and a clear display of lesson schedules and driver notes.

### 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?*

* Users have access to a reliable internet connection to use the online system.
* Customers have basic computer or smartphone skills to navigate the website and take online tests.
* The system will be hosted on a cloud platform that handles backups and security.
* The IT admin has the technical skills to manage user roles, reset passwords, and maintain the system.
* Training packages and content updates from the DMV will be provided in a compatible format for easy integration.
* The secretary and drivers will be trained to use the system for scheduling and notes entry.
* Data entered by users and staff is accurate and honest.
* The system assumes credit card payment processing complies with standard security protocols.
* Offline access is limited to viewing downloaded reports; no data updates are made offline.
* Future feature requests or major changes will require developer involvement and may not be immediate.

### 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 cannot allow users to modify data while offline to avoid data conflicts.
* Non-technical users will not be able to add or remove training packages without developer help.
* Integration with DMV updates depends on the DMV providing timely and compatible data.
* The project timeline limits the number of features that can be included in the first release.
* Budget constraints may restrict advanced security features or extensive customization options.
* The system relies on internet connectivity; users with poor or no connection may face issues.
* User training is needed for secretaries and drivers to use the system effectively.
* The system’s performance depends on the cloud provider’s reliability and uptime.
* Sensitive data handling must comply with security standards, which could add complexity.
* Future scalability may require additional investment in infrastructure and 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.*

A close-up of a project

AI-generated content may be incorrect.