# 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 design and develop a comprehensive web-based system for DriverPass that improves the way students prepare for their driver’s license exams. The system will combine online learning, practice exams, and in-person driving lessons into a single integrated platform. DriverPass, led by Liam and supported by IT officer Ian, wants the system to support customer registration, appointment scheduling, payment processing, training package management, and administrative oversight. The goal is to reduce student failure rates by providing interactive, current, and secure learning opportunities.

### 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 identified a gap in the market for high-quality driver training tools. Currently, most students rely on outdated study materials or previous tests, resulting in a failure rate above 65%. The proposed system will provide access to online study materials, DMV-compliant practice tests, and scheduling for in-person driving lessons.
* The system will include:
  + A web-based customer portal for registration, scheduling, and online learning.
  + An administrative backend for employee management, tracking, and reporting.
  + A secure database to store user data, appointment details, test results, and package information.
  + Integration with the DMV’s update feed to ensure rules, policies, and test content remain current.

### 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 DriverPass system should be able to:
  + Allow customers to create accounts and purchase training packages online.
  + Enable users to schedule, modify, or cancel driving lessons.
  + Track drivers, vehicles, and appointments accurately.
  + Allow administrators to disable or manage training packages.
  + Generate detailed activity reports for accountability.
  + Provide online practice tests with progress tracking and results.
  + Notify administrators of DMV policy updates automatically.
  + Maintain security and data integrity for all users.

## 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 shall operate as a cloud-based web application accessible from modern browsers and mobile devices.
* It shall respond to user inputs within three seconds for standard operations.
* The system shall achieve 99.9% uptime with automatic daily backups.
* Updates shall occur quarterly or as required for DMV compliance.

#### 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 application shall be compatible with Windows, macOS, and mobile browsers.
* The backend shall utilize a relational database such as MySQL or PostgreSQL.
* The system shall integrate with secure payment gateways.
* It shall be deployed on a cloud platform for easy scalability and data recovery.

#### 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 shall uniquely identify users by username and email address.
* All inputs, including names, payment details, and appointment times, shall be validated.
* The system shall notify administrators of failed login attempts or duplicate entries.
* Logs shall record every action such as reservation creation, modification, or cancellation.

#### 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?*

* IT administrators shall be able to add, modify, or disable users and packages without altering source code.
* The system shall adapt to future DMV updates and policy changes.
* It shall remain functional following browser or operating system updates.
* The IT officer shall have access to system maintenance and configuration tools.

#### 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 log in using a secure username and password combination.
* Passwords shall be hashed and stored using encryption standards.
* All data exchanges between client and server shall use SSL/TLS encryption.
* After five failed login attempts, an account shall be locked and an alert sent to the administrator.
* Users who forget passwords shall be able to reset them via email verification.

### 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, log in, and manage their accounts.
* The system shall validate all user credentials during login.
* The system shall allow customers to purchase and select training packages.
* The system shall allow customers to schedule, modify, or cancel driving appointments.
* The system shall assign drivers, vehicles, and time slots automatically based on availability.
* The system shall track lesson times and display driver comments.
* The system shall allow administrators to manage users, reports, and packages.
* The system shall allow IT staff to reset passwords and manage account permissions.
* The system shall synchronize with DMV databases to retrieve updated rules or test content.
* The system shall generate reports summarizing activity logs, test results, and performance.

### 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.)?*

* Customers: Will use a web browser to register, purchase packages, schedule lessons, take practice tests, and view progress.
* Secretary: Will manage customer profiles, appointments, and manual scheduling for phone or in-person requests.
* IT Officer: Will maintain the system, manage accounts, and handle technical configurations.
* Owner/Administrator: Will oversee operations, review reports, and control access permissions.
* The interface will be browser-based, responsive, and optimized for both desktop and mobile devices.

### 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 will have access to the internet and basic computer skills.
* DMV updates will be provided digitally through an accessible data feed or API.
* All online payments will be processed securely via a trusted payment service.
* Only authorized staff will have access to sensitive or administrative features.

### 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?*

* Disabling or enabling packages can be done by administrators, but adding or removing modules requires developer involvement.
* Offline functionality is limited to data viewing; updates require an internet connection.
* System features may be restricted initially due to budget and resource limitations.
* The system depends on stable network connectivity for full performance.

### 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 graph of a project

AI-generated content may be incorrect.