# CS 255 Business Requirements Document Template

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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 a system for DriverPass, a company that helps students prepare for their driver’s license exams.
* DriverPass wants a system that gives students access to online practice exams and on-the-road training lessons.
* The system should improve the pass rate for driving tests by combining study materials, practice tests, and real driving practice.
* They system must support multiple users, including customers (students), instructors, administrative staff (secretary), management, and IT staff.

### 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 that more than 65% of students fail the DMV driving test because they only study old tests instead of practicing effectively.
* The system should allow students to:
  + Take online practice exams.
  + Register for and manage driving lesson reservations.
  + Track progress and test results.
* They system should allow DriverPass staff to:
  + Schedule and manage driving instructors and cars.
  + Track who scheduled, canceled, or modified lessons (activity reports).
  + Maintain security and account management (reset passwords, block access, etc).
* The IT officer needs full access for security and maintenance.
* The system should connect with the DMV to update rules, policies and practice test questions when changes occur.
* Components needed:
  + Online web portal (accessible on desktop and mobile).
  + Secure user accounts with different access levels.
  + Reporting features for test results, driver notes, and activity logs.
  + Database for storing customer information, reservations, payments and instructor assignments.
  + Integration with DMV updates.

### 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?*

* The system should allow students to register for accounts and log in securely.
* The system should provide students with access to online practice tests that can be scored and tracked.
* The system should allow customers to schedule, modify, and cancel driving lessons online or through office staff.
* The system should track which instructor, vehicle, date and time are assigned to each student’s lesson.
* They stem should record student progress, including completed lessons, practice test scores and driver notes.
* The system should allow staff and management to generate activity and performance reports (e.g., who create, changed or canceled a reservation).
* The system should integrate with the DMV to update rules, policies, and test questions when changes are made.
* The system should support different user roles (student, instructor, secretary, IT admin, owner/manager) with appropriate permissions.
* The system should support secure payment processing for lesson packages and services.
* The system should be flexible to allow management to enable /disable training packages as needed.

## 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 should operate as a web-based application so it can be accessed on computers, tablets, and smartphones.
* The system shall load main pages (login, scheduling, practice tests) within 3 seconds under normal internet conditions.
* The system shall handle multiple users at the same time without crashing or slowing down.
* The system shall be updated regularly to ensure security patches, bug fixes, and DMV rule updates are applied.

#### 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 shall run on common operating systems such as Windows and Mac.
* The system shall support major browsers including Chrome, Firefox, Edge and Safari.
* The system shall use a cloud-based database to store customer records, lesson schedules, payments and test results.
* The system shall require an internet connection for real-time updates, although reports may be downloaded for offline use.

#### 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 identify each user through a unique username and password to avoid confusion.
* The system shall keep a detailed activity log of all reservations, cancellations, and modifications, including the date, time, and user responsible.
* The system shall notify administrators immediately if there are data conflicts, such as double-booked lessons or invalid payment details.
* Inputs such as usernames and passwords shall be case-sensitive to maintain security.

#### 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 shall allow administrators to add, remove, or modify user accounts (students, instructors, and staff) without changing the source code.
* The system shall be able to enable or disable lesson packages and service options through the admin interface.
* The system shall automatically adjust to browser and platform updates to remain compatible with Windows, Mac and mobile devices.
* The IT administrator shall full access control to manage user permissions, troubleshooting issues, and update system settings as needed.

#### 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?*

* The system shall require each user to log in with a unique username and password.
* All data exchanges between the client and the server shall be protected using encrypted HTTPS/SSL connections.
* The system shall temporarily lock a user’s account after three failed login attempts to prevent brute force attacks.
* Users shall be able to reset forgotten passwords through a secure, automated process that verifies their identity via email.
* The IT administrator shall be able to block, unlock or reset user accounts to maintain security and manage access.
* Customer payment data and personal information shall be stored securely in compliance with data protection standards.

### 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 create secure accounts and log in using a username and password.
* The system shall allow students to register online or through office staff.
* The system shall allow customers to schedule, modify and cancel driving lessons through the website or with the secretary.
* The system shall allow the secretary to enter lesson reservations manually for customers who call or visit the office.
* The system shall assign instructors and vehicles to each student lesson and prevent double-booking.
* The system shall track each driving session, including start and end time, assigned driver and comments.
* The system shall allow management to enable or disable lesson packages and customize package options.
* The system shall allow students to take online practice exams that can be scored and saved for review.
* The system shall generate activity reports showing who created, canceled or modified reservations.
* The system shall integrate with the DMV database to receive updates on rules, policies and test materials.
* The system shall allow customers to make secure payments for lesson packages online or through staff.
* The system shall automatically send notifications or confirmation for new reservations, cancellations or test updates.
* The system shall allow the IT administrator to reset passwords, block users, and manage system access rights.
* The system shall provide management with reporting tools for lesson scheduling, student performance, and instructor activity.

### 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 shall be a web-based interface accessible on computers, tablets and smartphones through standard browsers.
* The interface shall be user-friendly and easy to navigate, using clear menus, buttons, and labeled forms.
* The interface shall include separate login screens for each user type with role-based access.

### 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?*

* It is assumed that all users (students, instructors, secretary, IT admn, and management) will have reliable internet access and basic computer skills.
* It is assumed that the system will be hosted securely in the cloud and maintained by IT staff for updates and troubleshooting.
* It is assumed that the DMV will provide updated data in a format compatible with the DriverPass system.
* It is assumed that customers will have access to email accounts for password resets and system notifications.
* It is assumed that customers will have access to email accounts for password resets and system notifications.
* It is assumed that the online payment feature will integrate smoothly with a third-party payment processor (such as Stripe or PayPal).
* It is assumed that most users will access the system through a web browser rather than a downloaded app.

### 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 depends on internet connectivity, so users cannot make real-time updates offline.
* The project must stay within a limited budget and timeline, which may restrict advanced features in the first release.
* The system relies on third-party services (DMV updates, payments processing), so errors from those sources could affect performance.
* Customization options for lesson packages may be limited until a future system update.
* Hardware issues such as server downtime or data backup failures could temporarily affect system access.
* The system is designed for English-language users and does not currently include multilingual support.

### 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

AI-generated content may be incorrect.*