# 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?*

DriverPass has a clear mission: to help students feel fully prepared for their driving tests by offering both online learning tools andon-the-road training**.** The system we design will give students a way to register, access online practice exams, schedule driving lessons, and track their progress all in one place. At the same time, it will give staff such as the IT officer, secretary, and instructors the tools they need to manage accounts, handle scheduling, and generate reports. The overall purpose is to create a **secure,** reliable, and user-friendly system that improves the learning experience for students and supports DriverPass’s day-to-day business operations

### 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 was founded in response to a real problem: many people struggle to pass their DMV driving tests because they lack proper preparation. Liam, the company’s owner, wants to close this gap by offering a mix of online classes, practice tests, and in-person driving sessions. This blended approach provides students with both the knowledge and practical experience they need to succeed.

To bring this vision to life, DriverPass needs a system that:

* Lets students **book, cancel, or change appointments** online.
* Matches each student with a specific **driver, car, and lesson time**.
* Supports multiple training packages, ranging from a few hours of driving practice to a full program that includes online courses and DMV-focused lessons.
* Stays up to date with DMV rules and exam changes by syncing with DMV updates.
* Keeps detailed records and reports so the company can track who made, changed, or canceled reservations.

In short, the system is meant to provide a **modern, flexible solution** that makes the student experience smoother while also keeping the business organized and efficient.

### 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?*

To meet DriverPass’s needs, the system will be designed with the following goals:

* **User Accounts and Security**
  + Allow different user roles (students, staff, instructors, IT admin, and the owner).
  + Provide secure login, password resets, and administrator tools to block or reset accounts if needed.
* **Scheduling and Reservations**
  + Let students (or the secretary) book two-hour driving sessions.
  + Make it easy to cancel or reschedule appointments.
  + Record important details like the assigned driver, vehicle, and any instructor notes.
* **Training Packages**
  + Support flexible package options (6, 8, or 12 hours, with add-ons like DMV policy lessons or online classes).
  + Give administrators the ability to **turn packages on or off** as business needs change.
* **Learning and Testing Tools**
  + Provide online study materials and DMV practice exams.
  + Track test progress with clear status indicators (not taken, in progress, failed, or passed) along with time spent and scores.
* **Reports and Business Support**
  + Generate activity reports that show who made, modified, or canceled reservations.
  + Allow staff to export data (such as into Excel) for business and planning use.
* **Technical Foundation**
  + Be hosted online, using cloud technology for security, backups, and easy access from both desktop and mobile devices.
  + Safely process sensitive information such as student details and payment data.
  + Stay synced with DMV updates so materials and practice exams are always accurate and relevant.

Together, these objectives will ensure the system not only supports students in preparing for their driving tests, but also gives DriverPass the tools to manage operations efficiently

## 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 must support **concurrent access** by at least 500 users without noticeable lag.
* Response time for user actions should be **under 3 seconds** under normal load.
* Availability: **99.9% uptime**, excluding scheduled maintenance.

#### 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?*

* Web-based, cloud-hosted system (no local installation required).
* Compatible with major browsers (Chrome, Safari, Firefox, Edge).
* Mobile-friendly responsive design.

#### 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?*

* All scheduling data must reflect **accurate availability** of cars, instructors, and times.
* Payment data must be validated to prevent errors in billing or lesson reservations.
* Test scoring and progress tracking must compute and store results precisely.

#### 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?*

* Allow administrators to **enable/disable training packages** as needed.
* Architecture should support future expansion (e.g., new package modules, mobile app integration).
* System updates from the DMV must be easily incorporated without downtime.

#### 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?*

* Use secure login with **role-based permissions** (Administrator, IT Officer, Secretary, Student).
* Store sensitive data (e.g., credit card info) in encrypted form.
* Track all system actions by user ID and timestamp for auditing.
* Automatic password reset function for users who forget credentials.

### 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.”*

1. **User Registration and Authentication**
   * Users create accounts with secure login credentials.
   * IT Officer can reset passwords and disable accounts.
2. **Scheduling System**
   * Customers and staff can book, modify, or cancel 2-hour driving lessons.
   * System tracks assigned car, instructor, date, and time.
3. **Package Management**
   * System supports three training packages (6, 8, 12 hours).
   * Admins can enable/disable packages as needed.
4. **Online Course and Practice Tests**
   * Students can access online lessons and tests.
   * System tracks test name, time taken, score, and status (not taken, in progress, failed, passed).
5. **Reporting and Activity Tracking**
   * Generate user activity logs and reports.
   * Print/export data (e.g., Excel).
6. **DMV Integration**
   * System receives DMV policy and test updates with notifications.

### 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.)?*

* Intuitive, modern web dashboard for all users.
* Student view: Registration, online practice tests, progress tracking, appointment scheduling/cancellation.
* Secretary view: Manage appointments, customer data entry (by phone or walk-in).
* Driver view: Access assigned students, lesson times, and leave notes.
* Admin/IT view: Manage accounts, monitor activity logs, generate reports, handle system settings.

### 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 basic internet and computer literacy.
* DMV will provide timely digital updates through an accessible API or data feed.
* Internet connectivity is available for system access (offline use limited to viewing downloaded reports).

### 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?*

* Data modification is only possible when connected online to prevent duplicate or inconsistent data.
* The system’s first release will not include advanced customization of lesson packages by non-developers.
* Local backups and infrastructure security will rely on the cloud service provider.

### 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 gantt chart

Description automatically generated