# 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?*

* [Reduce DMV exam failure rates by delivering an integrated training solution that combines **online preparation** (classes + practice tests) with **on-the-road lessons**, while giving DriverPass staff the tools to schedule, track, and report on all activity.]

### 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 market gap: >65% of DMV applicants fail by only studying past tests. DriverPass will offer **three training packages** that blend road hours, an in-person DMV rules session, and (for the largest package) online classes with practice tests. The system must be accessible anywhere, cloud-hosted, and secure, with clear user roles and full activity tracking.]

### 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?*

* [Provide 24/7 access to **online classes** and **practice tests** with progress tracking.
* Support **self-service and staff-assisted scheduling** of 2-hour driving sessions.
* Maintain accurate **assignment of driver, car, date/time** for each reservation.
* Enable **role-based administration**, account resets, and auditability of changes.
* Keep learning content **current with DMV updates** and alert staff on changes.
* Offer **exportable reporting** and simple **Excel downloads** for at-home analysis.
* Operate reliably in the **cloud** with managed backup and security.]

## 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 DriverPass system must meet both functional and nonfunctional needs to support its business objectives. Functionally, the system will allow students to register, purchase training packages, schedule and cancel lessons, and complete online classes and practice tests. Students will also be able to view progress reports showing test names, scores, times taken, and pass or fail status. Instructors will use the system to view their assigned driving sessions, record start and end times, and enter performance notes for each student. The secretary will manage lesson reservations made by phone or in person and input customer data such as name, contact information, pickup and drop-off location, and payment details. Administrators, such as Liam, will oversee packages, view reports, and track activity, while the IT officer, Ian, will manage user accounts and security settings. The system will also connect with the DMV to receive updates about rule or policy changes and alert staff when new material becomes available.
* Beyond core functionality, the system must perform reliably, operate securely, and be easy to maintain. The DriverPass platform will be fully web-based and accessible from both desktop and mobile browsers, allowing users to log in and perform tasks from anywhere. Cloud hosting will ensure automatic backups, strong security, and minimal maintenance for the company. To prevent duplicate or inconsistent data, offline access will be limited to read-only features such as downloading reports for Excel analysis. The platform should be scalable to handle multiple users at once without noticeable performance issues and designed for quick navigation to minimize user frustration.]

#### 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?*

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#### 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?*

* [Data accuracy and precision are essential for maintaining trust in the DriverPass system. Scheduling data must be exact, ensuring that each booking connects a single student, instructor, car, and two-hour time slot with no conflicts. Practice test results must be calculated precisely to reflect the correct score and pass or fail outcome based on DMV standards. The system should also timestamp each transaction and log every modification so that administrators can trace when and by whom changes were made. This level of precision will allow DriverPass to produce reliable records and resolve any disputes that may arise.]

#### 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 must be flexible enough to evolve as DriverPass grows. Administrators should be able to enable or disable existing training packages without needing developer assistance, allowing the company to adjust offerings quickly. The platform should also be capable of receiving DMV updates automatically to ensure that training materials remain aligned with current regulations. Future system expansions, such as adding new lesson types or reporting features, should be possible without major redesigns by following modular development principles.]

#### 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?*

* [Security is a critical nonfunctional requirement for DriverPass. The system will implement role-based access control to restrict permissions based on user type, ensuring that students, instructors, secretaries, administrators, and IT personnel each have access only to the functions necessary for their roles. All sensitive data, including personal and payment information, will be encrypted in storage and during transmission using HTTPS protocols. Users will log in with unique credentials, and the system will include secure password recovery and account reset options. Failed login attempts will trigger account lockouts after a set threshold, reducing the risk of unauthorized access. Additionally, an activity log will track every account action, enabling DriverPass to identify when changes are made and by whom.]

### 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 DriverPass system must allow each user type to perform specific tasks that align with their role in the organization. Students must be able to create accounts, select a training package, make secure payments, and schedule or cancel two-hour driving lessons through the online portal. They should also have access to online learning materials, practice tests, and detailed progress reports displaying the test name, time taken, score, and completion status. Instructors need to view their assigned lessons, record start and end times, and submit driver comments about student performance. The company secretary must be able to enter customer information received by phone or in person, including personal details, pickup and drop-off locations, and payment data. Administrators, such as the company owner, must be able to manage packages, disable outdated offerings, view business reports, and monitor activity logs. The IT officer will oversee account maintenance, manage user permissions, and reset or disable accounts when necessary. The system must also connect to the DMV to receive updates to driving regulations and testing materials, ensuring that all student content remains current and compliant with official standards.]

### 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 DriverPass user interface should be intuitive and tailored to each user role. The student dashboard will serve as the main hub, displaying upcoming lessons, package status, and a table listing practice tests with their time taken, score, and completion status. It will also feature a section for driver notes that includes lesson dates, start and end times, and any instructor feedback. The secretary interface will include a form for entering student information and a scheduling tool that prevents overlapping appointments. The instructor portal will present a weekly view of assigned lessons with quick access to update attendance and comments. Administrators will have a dashboard summarizing overall business performance, lesson utilization, and student progress, along with access to enable or disable packages as needed. The IT administrator’s interface will include tools for user management, password resets, and system security monitoring.]

### 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?*

* [This system design assumes that all users will have reliable internet access and valid contact information, such as an email address or phone number, for verification and password recovery. Payment processing will be handled through a third-party, PCI-compliant service to ensure secure transactions. It is also assumed that pickup and drop-off locations for lessons will remain the same for simplicity in scheduling. Finally, it is expected that the DMV will continue to provide an accessible method for updating rule sets, policies, and sample questions through an online feed or secure upload mechanism.]

### 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 will not allow offline editing or data synchronization to prevent redundancy and conflicting records. Additionally, while instructors will record lesson times and comments, the system will not include real-time GPS or telematics tracking during lessons. Only DMV standards within the United States will be supported in the initial release. Adding or removing entire package modules will require developer involvement in future updates; however, administrators can enable or disable packages as needed within the current version.

### 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 gantt chart with multiple colored boxes

AI-generated content may be incorrect.

Figure 1 displays the DriverPass System Development Gantt Chart, which outlines the full project schedule from January through May 2024. The analysis and design phase begins in late January with requirements gathering and the creation of use case and activity diagrams. Interface design and system integration occur from March through April, followed by the development of business logic and database connections. The testing and delivery phase runs through late April and early May, ending with a final sign-off meeting. The chart illustrates dependencies between tasks, showing overlapping timelines to improve workflow efficiency and ensure that each phase transitions smoothly into the next.]