# 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 client is DriverPass, a company focused on providing enhanced driver training. DriverPass aims to fill the gap in the market for quality driving instruction that effectively prepares students for their driving tests with the DMV. They want a system that allows customers to access online and offline data, including progress on driving tests, scheduling driving lessons, and accessing customized training materials. The system should be able to provide accurate data management, flexible scheduling, and maintain compliance with DMV regulations.

### 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?*

* **What is the problem that DriverPass wants to fix?**

DriverPass has identified a problem with the current state of driver training, where many people fail their driving tests. The perceived gap is in the quality and accessibility of driver education, which DriverPass believes leads to insufficient preparation for the driving test.

* **What solution does DriverPass want to offer?**

The solution DriverPass proposes is a comprehensive training system that not only delivers in-person training but also supplements this with online resources and on-the-road training. This system will be designed to be accessible from any device, support data access both online and offline, and include functionality to schedule driving lessons, track progress, and provide customized learning experiences tailored to the needs of each student.

### 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?*

1. Users should be able to access their data online from any device and download reports and other information for offline work.
2. The system should allow customers to schedule, view, and manage their driving lesson appointments online.
3. Different access levels are needed for employees and the ability to reset accounts or block access when necessary.
4. The system should enable tracking of lesson reservations, cancellations, and changes, providing an activity report for accountability.
5. The system must stay connected with the DMV to remain updated on rules, policies, and practice questions.
6. Ability to manage different training packages and customize them according to business needs, including enabling and disabling certain packages.
7. **A**ll data must be securely backed up, with minimal technical issues with good practice security measures.

## 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 platform should be hosted online to ensure it can be reached from multiple devices. It must operate seamlessly to guarantee a pleasant experience for users. Additionally, consistent updates are necessary to maintain the reliability of the content and to safeguard the system's security measures.

#### 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 should be configured to operate on Linux systems and employ Microsoft Azure for its cloud-based operations. It should include a database to store data such as student profiles, instructor details, assessment scores, records of tests administered, notes on driving instructors, and historical driving data.

#### 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?*

* Every user account will come with a predetermined role attached to it, encompassing positions such as learner, instructor, staff member, and system administrator. These roles will be allocated the moment the account is set up, and the system will require precise input, with attention to upper- and lower-case letters. Immediate alerts will be sent to the system admin if there are any operational difficulties, like a user repeatedly entering an incorrect password or an account becoming inaccessible.

Top of Form

#### 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?*

* Yes, alterations to user profiles can be executed without the need to modify the underlying code. System admins will update the system daily for any platform updates that need to be applied. Full system access is necessary for the system administrator to effectively resolve any issues across the various departments within the organization.

#### 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?*

* System access requires users to set a secure username and password, enhanced with multi-factor authentication to maximize login security. In case of forgotten passwords, users should be able to receive a temporary password via a linked email to regain access. After a hacking attempt, such as a brute force attack, the user’s account is to be locked, necessitating contact with IT support or customer service for reactivation. The user must then confirm their identity using personal details like their phone number, email, or ZIP code. Data management and security between client and server interactions will be fortified by utilizing cloud services, which also enhances the overall security of the stored data.

### 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 is required to:

* Authenticate user credentials during the sign-in process.
* Enable user enrollment and participation in online courses, simulated exams, and actual driving sessions.
* Provide a feature for users to review the profiles and qualifications of their instructors.
* Offer a tracking mechanism for academic progress, inclusive of class attendance, test completion, and practical training, supplemented with instructor remarks and feedback.
* Empower instructors with the ability to monitor the advancements of their students and to annotate with their insights or evaluations.

### 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 user interface should be accessible on internet-connected devices such as mobile phones, laptops, tablets, and desktop computers. The primary users of this interface will be IT personnel, administrative staff, and end-users, which include consumers or customers. IT and administrative staff will require unrestricted access to the application to perform necessary modifications or updates. Meanwhile, consumer or customer access should be restricted to prevent unauthorized changes to the system, allowing them to use only the features pertinent to them. User interaction with the interface will be through a web browser, as the application is currently exclusively web based.

Top of Form

### 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?*

The design presumes that:

* Users will be equipped with a mobile device, laptop, or computer and have internet connectivity.
* Users will log in using a secure username and password.
* Users will have the capability to partake in practice tests and engage in online classes.
* Users will have the option to schedule live practice tests for direct, experiential training.

It should be noted that the budget has not been explicitly addressed in the design due to the absence of specifications from the project owner.

Top of Form

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### 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?*

Limitations identified in the system design primarily relate to:

* *Time constraints.*
* Even though the Gantt chart and timeline devised in the Schedule Planning phase provide a definitive schedule for task completion, it is not assured that each task will be accomplished within the allotted time as there may be inevitable because there are likely to be limitations on the number of developers, technology, and budget that could interfere with the amount of time it takes to complete the tasks.

### 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 report

Description automatically generated*[Insert chart]