# 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, the client, wants to design a system that helps students pass driving tests more effectively. The goal is to provide online practice exams and on-the-road training to reduce the high failure rates caused by reliance on rote memorization of test questions.

### 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 needs the system to:
* Provide realistic practice exams.
* Allow students to schedule and track on-road training sessions.
* Offer instructors the ability to monitor student progress.

The main problem DriverPass wants to solve is the lack of comprehensive training tools for driving tests. Components of the system include:

* A web-based platform.
* A scheduling module.
* Secure databases for storing user progress and credentials.

### 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 completed system must:

* Enable students to take realistic practice exams online.
* Allow students to book and manage on-road training sessions.
* Track student progress and performance metrics.
* Provide instructors with easy access to student performance data.
* Ensure secure access for all user roles.

## 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 be web-based and accessible 24/7.
* System pages should load in under 3 seconds.
* Updates should be applied every two weeks.

#### 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 must run on Windows, macOS, Android, and iOS.
* A SQL-based backend is required for secure and scalable data storage.

#### 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?*

* User roles (student, instructor, admin) must be clearly distinguished.
* Inputs must be case-sensitive (e.g., for passwords).
* System alerts should notify admins of failed logins or system errors.

#### 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 admins should be able to add, modify, or remove users without needing to update the code.
* The system must adapt automatically to browser and OS updates.

#### 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?*

* Two-factor authentication is required for login.
* Data exchanged between client and server must be secured with SSL encryption.
* Accounts should lock after 5 failed login attempts to prevent brute force attacks.
* Forgotten passwords should be reset via secure 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 validate user credentials during login.
* The system shall allow users to complete timed practice exams.
* The system shall allow students to book and modify training sessions.
* The system shall provide instructors access to student progress data.
* The system shall notify users of upcoming training sessions via email.

### 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 will serve students, instructors, and admins.
  + **Students:** Will use the interface to take exams, book training sessions, and view their progress.
  + **Instructors:** Will monitor student performance and training schedules.
  + **Admins:** Will manage users and system configurations.
* The interface must be accessible via browsers and mobile apps, optimized for both platforms.

### 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?*

* All users will have internet access and basic computer or mobile literacy.
* Students and instructors will be registered in the system before using the platform.
* System maintenance and updates will be handled by DriverPass IT.

### 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?*

* Limited project budget may restrict advanced features, such as AI-based training recommendations.
* The tight 3-month timeline may limit extensive testing and user feedback iterations.
* The system will initially support only English as a language.

### 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.*

