# 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 purpose of this project is to design a system for DriverPass that allows students to access online practice exams and on-the-road training in order to better prepare them for driving tests.
* The client, DriverPass, wants the system to provide an online platform for students to take practice driving exams and schedule real-world driving training.

### 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 aims to address the high failure rate among students taking the driving license exam, which is largely due to reliance on outdated test papers rather than comprehensive preparation.
* The system will need components like a user interface for students, a backend system to manage user data, test materials, and training schedules, and tools for instructors to manage and grade tests.

### 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 students with access to a wide range of driving test questions that mimic the actual driving exam.
* Allow instructors to schedule training sessions and manage student progress.
* Enable real-time feedback for students after completing practice exams.
* Track student performance over time to identify areas for improvement.

## 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 be web-based, accessible on any modern browser (Chrome, Firefox, Edge).
* It should perform quickly, with loading times under 3 seconds for pages and test results.
* The system should be updated regularly to add new practice questions and adjust content based on the latest driving regulations.

#### 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 should be compatible with Windows, MacOS, and Linux operating systems.
* A database (e.g., SQL) will be required to store user data, test results, and training schedules.

#### 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 credentials should be case-sensitive, and the system should verify identity using secure login methods.
* Admins should be informed immediately if there are any data inconsistencies or issues (e.g., incomplete user records).

#### 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 should allow for easy changes to user roles and permissions without needing code changes, leveraging an admin interface.
* It should be able to adapt to updates in the platform (browser versions, new web technologies) without major code refactors.
* IT admins need full access to the backend for system updates and user management.

#### 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?*

* Users must log in using secure authentication methods (e.g., email and password, multi-factor authentication).
* The connection between the client and server should be encrypted using SSL/TLS.
* If a “brute force” attack is detected, the system should lock the account after multiple failed attempts and notify the user via email.
* If a user forgets their password, they should be able to reset it using a secure password recovery process.

### 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 students to create an account and log in securely.
* The system shall validate user credentials when logging in.
* The system shall allow students to access practice exams and view their results.
* The system shall allow instructors to schedule driving sessions for students.
* The system shall track student progress and provide feedback based on exam results.
* The system shall allow admins to manage users, schedules, and system settings.

### 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 interface should be accessible via a web browser and should be responsive to work on both desktops and mobile devices.
* **Students** should be able to:
  + Register and log in.
  + Take practice exams and review results.
  + View their progress over time.
* **Instructors** should be able to:
  + Schedule training sessions.
  + Monitor student performance on practice exams.
* **Admins** should be able to:
  + Manage user accounts and roles.
  + Generate reports on student performance.
  + Update system content and configurations.

### 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 system will assume that users have internet access and modern browsers.
* It is assumed that DriverPass will provide the necessary content for the practice exams and that instructors are familiar with basic online tools.
* Users will have basic knowledge of driving rules and standards, so the system will not need to teach basic driving principles.

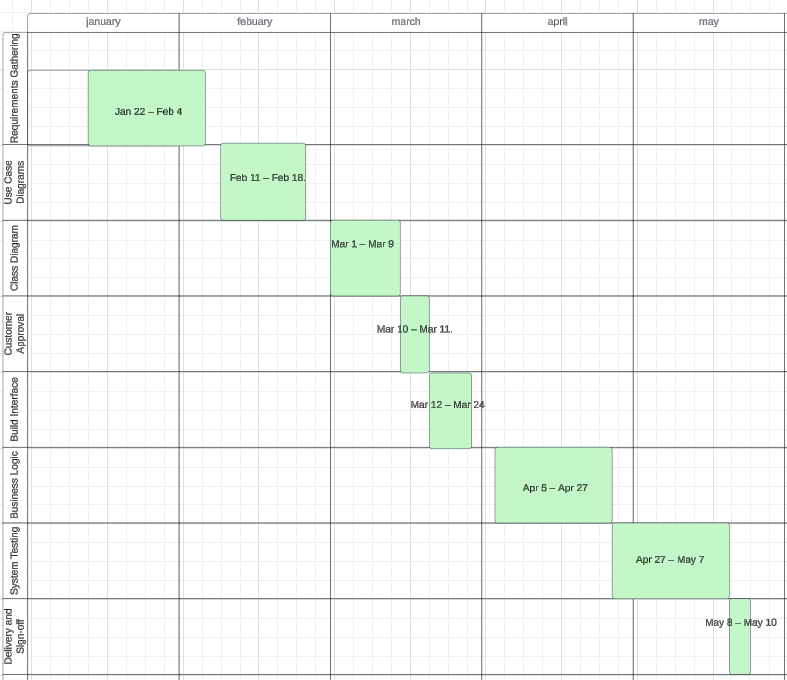
### Limitations

*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?*

* There may be limitations in terms of content creation (e.g., questions for practice exams may not be immediately available).
* The system's initial development will be time-constrained, and certain advanced features (like adaptive learning paths for students) may not be included in the first version.
* Budget and resource constraints might limit the initial scope of the project (e.g., fewer exam questions to start).

### 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.*

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