# 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 develop a system that will comprehensively assist students in passing their driving tests. The platform being developed will enable students to succeed by providing online practice exams, in-person driving lessons, and will include lessons tracking to assess student success rates. Students will be able to schedule lessons, receive feedback, and access practice tests that align with DMV standards, and administrators will be able to access and manage their lessons, students and reports.

### 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 has identified that over 65% of students fail their driving tests due to relying solely on past exam questions. This results in low test performance and high retest costs for students.
* DriverPass therefore wants to create a system that is cloud based and provides students with the tools that they need in order to succeed, overcoming these restrictions. The components of this system are:
  + Online Practice Tests
  + On-The-Road driving lessons
  + Instructor feedback
  + Automated reservations
  + Compliance with DMV standards and practices

### 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 system should enable students to log in, access their tests, practice quizzes, and their progress levels and performance data. They need to be able to set up and cancel appointments and take DMV level tests. Administrators also need to be able to access their curriculums and statistics. All of this must be remote accessible.
* Specific objectives include:
  + Student scheduling
  + Instructor feedback
  + Role-based user access
  + Live data updates
  + Secure payment systems

## 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 needs to be able to run from a user’s local computer, but also must be accessible from mobile devices for ease of use. Users must also be able to log in from separate or public computer stations, such as a library, so that lessons can be completed by those without personal communication devices.
* The system should be responsive, able to handle a load of at least 500 simultaneous users. Data retrieval should last no longer than 5 seconds, with some aspects such as login and scheduling being no longer than 2.

#### 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 platform should be supported by all major Windows, MacOS and unix distributions, as well as mobile platforms (iOS, Android). Chrome browser must be supported, with extended functionality to include Firefox, Safari, Edge.
* Backend must include databases storing student records, appointments and results information
* Backend must also include access to payment processing platforms.

#### 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?*

* Users will each have their own profile in the system user database, with distinctive classes separating permissions accessible by administrators and students.
* The system shall validate inputs for sensitive information, such as names and dates. Only passwords will be Case Sensitive.
* Admins will be notified right away if system errors occur, such as a failed transaction or scheduling conflicts.

#### 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 able to support profiles where users can be added, removed or modified without coding changes being necessary.
* The code must also be adaptable to new or improved platform updates without interruption.
* The IT admin will have complete full access to all systems, including modifying server settings, admin access controls, and updating content of tests.

#### 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 will be able to login with an email and a password.
* For security the system will use HTTPS for data exchange between the client and the server
* To prevent brute force attempts, three failed login attempts will lock the account and require authentication by email.
* Users may reset their password by inputting their email and receiving a link to access a secure password reset input.

### 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 in order to log in.
* The system shall allow students to create, edit, or cancel driving test lessons.
* The system shall show students available instructors and time slots to schedule lessons
* The system shall track student progress
* The system shall enable instructors to leave feedback for students
* The system shall send email and text reminders for upcoming sessions.
* The system shall support third party payment platforms

### 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 needs of the interface are to have:
  + A student dashboard, for accessing lessons, scores, and upcoming lessons
  + Instructor dashboard, for reviewing schedules, providing feedback
  + Admin dashboard, for managing the system and user activity.
* Browser interaction will be straight forward, while mobile interaction will reduce and simplify some functionality and provide shortcuts to critical or most frequently used functions.

### 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?*

* We do assume that the users will have internet access, or that internet access will be consistent enough to be effective. We briefly address accessing the system through third party technology such as libraries, but even these can be scarce for some users.

### 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?*

* This system will only benefit those who have the time and resources to dedicate to being thorough and complete in their driving test knowledge. Users are free to schedule their tests and driving times, but this system fails to address user cancellations and optimizing time slots for when a user does not show up. This can be stressful to the instructor whose time was wasted and the company who is not getting its value worth.

### 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 computer

AI-generated content may be incorrect.