# 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
* Wants users to be able to take online classes and practice tests to prepare for their real driving test
* Wants to give users the option to book an in-person appointment with employees for on-the-road 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?*

* Help student drivers pass their tests with online classes and tests.
* Allow students to book appointments for hands-on training to get more experience before their actual driver’s test.
* Students can see their results of both online and in-person training to see where they need to improve.
* Connect to DMV so the website can be easily updated if there are new rules or policies to account for.

### 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?*

* Allow users to schedule an appointment online with their account, choosing date and time.
* Allow users to edit or cancel appointments if needed.
* Users can choose between three packages for their on-the-road training.
* Different levels of access for different users. (Admin, IT, Students, Instructors)

## 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?*

* System must operate in a web-based environment, ideally hosted in the cloud.
* System should perform efficiently to prevent duplicate appointments and allow users to view available appointments and drivers in real time. Test results should be displayed immediately once completed.
* Regular system updates are required to ensure the system’s ongoing performance and reliability.

#### 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?*

* System should be compatible with Windows and use Amazon Web Services (AWS) for cloud computing infrastructure.
* System will require a database to store various types of data, including customer and driver information, test scores, completed tests, driver notes, and past driving history.

#### 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?*

* Each user will be assigned a specific role upon account registration. This will include Student, Driver, Staff, or Admin.
* Role assignments will be case-sensitive.
* System should notify Admins immediately of any critical issues, such as repeated incorrect password attempts or account lockouts.

#### 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?*

* System will allow user information to be added, removed, or modified without requiring changes to code.
* Staff and Admin roles can add or update Student profiles, while only Admins have permission to add, remove, or modify Staff and Driver profiles.
* System is designed to retain all data within databases, ensuring that the information remains intact during platform updates.
* IT Administrator will require full system access in order to troubleshoot issues across all user roles 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?*

* To log in, users will be required to enter a case-sensitive username and password, while also completing two-factor authentication (2FA), all of this must be set up prior to accessing the platform.
* To secure data exchange between client and server, all data will be encrypted, and communication will occur over HTTPS, system will also be continuously monitored for security updates and vulnerabilities.
* If there is an attempt at “brute force” hacking, account will automatically lock after 5 failed password entries. Account will remain locked for 30 minutes, while both the Admin and the User receive alerts.
* 2FA will add a layer of protection in the event that a user’s password is compromised, user will also be notified of any suspicious login attempts.
* If a user forgets their password, they must provide the registered username and email address associated with the account. If the information matches an existing account, a password reset link will be sent to their email, which will allow them to securely update the credentials.

### 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 enable students to take the driving knowledge test
* The system shall allow students to schedule driving appointments with an instructor
* The system shall allow staff members to schedule driving appointments on the behalf of students
* The system shall allow administrators to remove employee accounts
* The system shall display a history of tests taken by each student
* The system shall allow drivers to submit feedback or notes about students’ driving sessions

### 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 must include the following components: personal information, student and driver identification, online test progress, driver feedback notes, and any specified special needs
* Students must be able to: access their completed and in progress tests, update their personal information, schedule driving appointments and view feedback or notes left by their assigned driver
* Drivers must be able to: update their personal profiles and leave feedback or notes for the students they drive with
* Admins must be able to: add and edit user profiles, schedule appointments, add new employees, and view the history of edits made across the system
* Staff must be able to: schedule driving appointments on behalf of their students and edit user profiles
* All users will access the system through a web-based interface

### 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?*

* It is assumed that users will have internet access and are using a laptop or desktop computer to interact with the system
* Users are expected to have access to a secondary device, such as a mobile phone, to complete 2FA
* It is assumed that users possess a basic level of digital literacy, including the ability to access and navigate a standard web-based interface

### 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?*

* Some limitations include varying levels of expertise among developers, which could lead to inconsistencies in implementation
* The current interface mockup lacks detailed design elements and could require further development to enhance usability and visual appeal

### 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 diagram with different colored boxes

AI-generated content may be incorrect.*