# 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 take over as the systems analyst for the DriverPass project. DriverPass wants the system to be able to provide the students with access to online practice exams and on the road training to better prepare them for driving tests. DriverPass wants help in designing a system that can handle these needs.

### 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 wants the system to help students prepare for their driving tests more effectively by providing online practice exams, on-the-road training scheduling, and a way to track progress. The problem they want to fix is the high failure rate for driving tests, which happens because many students only study previous tests without adequate preparation.
* System components:
  + Online practice portal
  + Scheduling system
  + Role based access control
  + Reporting tools
  + Cloud based platform
  + Notifications/updates

### 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 students to schedule, modify, cancel and take online driving lessons with progress tracking
* Allow IT staff to reset accounts, manage user access, and block accounts when necessary
* Track and log all user actions like reservations, cancellations and modifications
* Generate activity reports detailing who made changes, when, and what was changed
* Allow the exporting of reports to formats like Excel for offline use
* Measurable tasks:
  + Create role specific dashboards
  + Develop lesson scheduling system linked to trainers and cars
  + Implement secure logins
  + Build progress tracking and reporting features
  + Connect to DMV for updates

## 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 run on a web-based environment that users can access on any computer or mobile device.*
* *System should be cloud based*
* The system should load pages and process user actions within about 2-3 seconds for a seamless user experience
* Important updates like changes to DMV rules and content should be updated immediately to maintain compliance

#### 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 needs to run on all operating systems
* Back-end tools needed:
  + Database like MySQL for example to store user data and system information
  + Cloud hosting platform for security and reliability
  + API integration for real time DMV updates on regulations

#### 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?*

* The users will be differentiated by their roles
  + Students
  + IT
  + DriverPass employees
* The input will only be case sensitive for password entry and settings but not for personal information
* The system should inform the admin of a problem when the system is experiencing any errors or failures, or when there are unauthorized access attempts

#### 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, the user will be able to manage information based on their role through a personal dashboard
* Because it will use a cloud-based platform the system should adapt seamlessly to platform updates.
* IT admin access:
  + Control over accounts
  + Tools to reset passwords
  + Access to system logs
  + Rights to enable/disable system features

#### 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?*

* The user requires their login email and password designated when they created their account
* SSL encryption like HTTPS will be used for a secure connection for data like passwords and personal information
* If there is a “brute force” hacking attempt the system should lock the account
* If the user forgets their password the system should allow them to reset it after verifying their identity or contacting the IT admin to reset it

### 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 when login in
* The system shall allow students to schedule, modify, and cancel driving lessons online, and track progress with practice exams
* The system shall provide role-based access for users with appropriate permissions for each role
* The system shall allow IT admins to reset passwords, block accounts, and track user activities
* The system shall integrate with DMV systems for updates on rules, policies, and test content, and notify users of changes
* The system shall generate, store, and allow users to download activity and progress reports
* The system shall enable access across devices through a secure, web-based interface.
* The system shall allow employees to manage customer information, and enable admins to disable specific lesson packages
* The system shall securely store customer data (contact, payment) with encryption and ensure secure communications

### 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.)?*

* Users and their needs:
  + Students
    - Scheduling, modify, and cancel driving lessons
    - Access practice exams and track progress
    - View their progress
  + Employees
    - Manage appointments and customer information
    - Input customer information when students call to set appointments
  + IT
    - Reset passwords and block users
    - Manage user roles and access rights
    - Monitor system logs and activity reports
  + Owner(Liam)
    - View business performance through reports
    - Manage lesson packages
* Users can interact with the interface through both a mobile and desktop browser

### 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?*

* Unaddressed details
  + Specific design details like color, fonts, themes and layouts
  + Specific storage requirements for the database capacity
  + How new features, users, or packages will be added later on
* Assumptions
  + Users have a reliable internet connection
  + Users are using capable devices that are update with current software
  + Users are using a compatible browser

### 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?*

* System design limitation
  + System requires a constant online connection
  + Users like IT or Liam, the owner, can not fully modify lesson packages without help from developers
  + DMV might not immediately update their information so real time updates might not be possible
* Resource limitations
  + A limited budget might restrict certain features, tools and performance
  + The project timeline might limit the implementation of more advanced features
  + Users with slow internet speeds may be inpacted

### 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 calendar

Description automatically generated