# 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 and implement a comprehensive system for DriverPass, a client aiming to enhance driver training and preparation for driving tests.
* DriverPass seeks to bridge the gap in driver training by offering a multifaceted platform that includes online classes, practice tests, and on-the-road training modules.
* By developing this system, the goal is to improve the success rate of individuals taking driving tests at their local Department of Motor Vehicles (DMV) and ultimately contribute to safer roads through better driver education and preparation.

### 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 provide comprehensive driver training services, including online classes, practice tests, and on-the-road training.
* The problem DriverPass aims to fix is the high failure rate of individuals taking driving tests at their local Department of Motor Vehicles (DMV) due to inadequate preparation.
* The different components needed for this system include:
  + Online class modules with interactive learning resources.
  + Practice test functionalities covering various aspects of driving theory and regulations.
  + On-the-road training modules with real-world scenarios to simulate driving experiences.
  + Scheduling tools for booking driving lessons and managing instructor availability.
  + User management systems for handling student registrations and administrative tasks.

### 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?*

* Enable users to access online classes, practice tests, and on-the-road training modules conveniently.
* Provide tools for scheduling driving lessons and tracking user progress effectively.
* Ensure data security and privacy measures to protect user information.
* Establish connectivity with the DMV to stay updated on regulatory changes and ensure compliance with driving test requirements.
* Improve the success rate of individuals taking driving tests at the DMV through comprehensive driver training and preparation.

## 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?*

* Environment:
  + Web-based: The system must run on a web-based platform.
  + Cloud-hosted: The system should be hosted in the cloud to ensure scalability, reliability, and minimal downtime.
* System Speed:
  + Response Time: The system should have a fast response time, ideally loading pages and processing requests within 1-2 seconds under normal operating conditions.
  + Scalability: The system must be capable of handling concurrent users efficiently,
* System update: Immediate updates when there are changes in DMV rules and regulations to ensure ongoing 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?*

* Supported Platforms:

The system should run on computer and mobile browsers: Internet Explorer, Google Chrome, Firefox, Safar

* Back-End Requirements:
  + database to store user and system information.
  + web server to process and manage requests and responses.

#### 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 Differentiation:
  + Unique Identifiers: Each user will be distinguished by a unique identifier such as a user ID or email address.
  + Permissions: Users will be assigned specific roles that determine their access functionalities within the system
* Password for each user will be case-sensitive
* Admin Notifications: The admin should be informed of any critical system failures and security-related issues such as unauthorized access attempts, data breaches, or unusual activity patterns.

#### 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?*

* User management tasks will be handled within the backend of the system, allowing changes to user accounts without altering the codebase.
* System should adapt to any platform updates without issues
* IT admin needs access to the database and web server to maintain and modify the system

#### 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?*

* User Login Requirements:
  + Authentication Credentials: Valid username/email and password required.
  + Authorization: Access granted based on verified permissions.
* Securing Connection:
  + Secure Communication Protocols: Utilize HTTPS for protection.
* Password Recovery Process:
  + Password Reset: Enable users to reset passwords securely.
  + Temporary Access: Provide temporary access or password/token for recovery.

### 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 users to register for an account by providing necessary personal information, including first name, last name, address, phone number, state, and payment details.
* The system shall validate user credentials during the login process to ensure secure access.
* The system shall distinguish the type of user: customer or admin
* The system shall provide an administrative interface for managing user accounts, including the ability to add, remove, or modify user details without requiring code changes.
* The system shall display types of packages for customers to choose from
* The system shall maintain compatibility with major web browsers such as Internet Explorer, Google Chrome, Firefox, and Safari for optimal user experience.
* The system shall connect with DMV to be updated with new information
* The system shall display customer information, test progress, and status
* The system shall display driver notes
* The system shall display lesson time, start hour, end hour

### 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.)?*

* Interface Needs:
  + Accessibility
  + Efficiency
  + Responsive Design
  + Security
  + Customizability
* Different Users and:
  + Admin: Manage user accounts (add/remove/modify)
  + IT Officer: Maintain system integrity and security.
  + Secretary: Schedule and manage driving lesson appointments.
  + Customer: Schedule, cancel, or modify driving lesson appointments.

### 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 have online access
* All users will understand how to navigate the website
* Admins have the necessary skills to navigate and access all website functions
* Customers will be on time and show up for every lesson in their package chosen
* Drivers will be available and make it to every driving lesson

### 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?*

* Meeting all the requirements of DriverPass within their budget and time frame
* DriverPass has 10 cars, each car needs to be maintained to be able to use
* Only so many customers can purchase packages with the limited number of cars

### 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

Description automatically generated