# 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?*

* Liam, the proprietor of DriverPass, identified a gap in the market for providing comprehensive training to students preparing for their driving test.
* Liam seeks to develop a new system that offers online lessons, practice exams, and on-the-road training to help students better prepare for their driving test.
* The primary objective of this project is to create a user-friendly website that provides students with access to all the necessary training resources to pass their driving test successfully.
* The website will offer a range of interactive online lessons and practice exams to help students learn the rules of the road, understand traffic signs and signals, and improve their driving skills.
* The system will incorporate on-the-road training with experienced instructors who will provide practical driving lessons to students.
* This aspect of the project is particularly important as it allows students to gain hands-on experience and build their confidence in a safe and controlled environment.
* Liam will need to work closely with a team of developers to design a user-friendly website that is easy to navigate and provides students with access to all the training resources they need.

### 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 decrease the fail rate of the DMV driving test.

* The system will provide online lessons, practice exams, and on-the-road training to help students prepare for the test.
* The system should be accessible online via a computer or mobile device and also have an offline data download feature.
* Proper security measures should be implemented to ensure users can only access the right account with the correct data.
* The system should be able to track reservations, cancellations, and modifications.
* There should be three packages with different pricing and perks for users to choose from.

### 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 allow clients to take notes during the lessons and view the date and time of the lesson.
* The system should be accessible offline at all times.
* Clients should be able to track the driver, time of driving, and the car.
* The tasks included in the system should be up-to-date with the driving test schedules and any other crucial information for student training.
* The system should offer different packages for students to choose from, and once a student selects a package, the client should be able to disable the other options.
* Students should take their tests online and be able to view their progress, the length of their process, and the tests they need to complete.
* The progress format will include the name of the test, time taken, score, and status.
* The status will indicate whether the user has passed, failed, is in progress, or has not taken the test.
* DriverPass Employee needs:
  + Full access to all the data for the clients
  + Download reports in a .xlxs file format
  + Reset customer accounts due to forgot passwords or usernames
    - Block customer accounts if needed
* End User needs
  + Allow end user to create an account that includes the following
    - Full Name / Address / Phone / State / Credit Care information including expire date and security code
    - Ability for employees to create accounts as well
  + After information entered is verified end users can
    - Make appointments including;
      * Date and time
      * Pickup and dropoff locations
      * Choose a driver
      * Cancel appointments if needed
      * Modify appointments up to a certain timeframe before
      * Choose one of three packages listed below
        + Package One: Six hours in a car with a trainer
        + Package Two: Eight hours in a car with a trainer and an in-person lesson where we explain the DMV rules and policies
        + Package Three: Twelve hours in a car with a trainer, an in-person lesson where we explain the DMV rules and policies—plus access to our online class with all the content and material. The online class also includes practice tests.
  + Appointments slots should be two hours long

## 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 regularly updated to ensure there are no bugs and to comply with any changes in DMV guidelines.
* The DMV guidelines must be communicated to students to ensure they provide accurate information.
* The system should be web-based to allow easy access via a computer or mobile device.

The system must be able to operate at a consistent speed to facilitate the sending and receiving of requests between the servers and the user, especially during exams.

#### 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 various web browsers such as Microsoft Edge, Google Chrome, Safari, and other web browsers.
* The website should be mobile-friendly and able to adjust to different screen sizes of mobile devices such as iPhone, Android, etc.
* The back end of the system will need a database to store information.

#### 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 given a unique email and password for identification.
* All inputs must be case sensitive to ensure security.
* The system will have a limit on the number of times a user can input incorrect information. If exceeded, the admin will be notified of the issue.

#### 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 will allow changes to be made without altering the code. The user will have the ability to write in the code, post requests, and controllers.
* The system should be adaptable and able to perform updates by accepting requests from programmers.
* The IT admin will have access to all user accounts and can remove any unauthorized employees from 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?*

* Users must have a username and password to log in, and use multifactor authentication.
* Cloud storage will be used for data exchange between client and server.
* The system will disable an account after four unsuccessful login attempts to prevent brute force attacks.
* If a user forgets their password, they can enter their email address associated with the account, and a password reset link will be sent to that email.

### 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 display the available packages for customers and allow them to select one.
* The system shall implement updates and changes as required by the DMV guidelines.
* The system shall verify and store the following customer information:
  + First and Last Name
  + Address
  + Phone Number
  + Credit/Debit Card Information
* The system shall distinguish between student and admin user types.
* The system shall be available online at all times to provide study materials.
* The system shall display all 3 packages to the customer, including any disabled packages, and allow them to disable unavailable packages.
* The system shall enable password reset for users who have forgotten their password.
* The system shall display the student's exam progress and scores.

### 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 system shall display the following pages: Home Page, Exams, Grades, and User Information.
* If a user is new, the system shall prompt them to confirm their email, address, and phone number.
* The system shall display the status of the exams.
* The system shall allow users to view notes provided by instructors.

### 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 assumes that users have access to a stable internet connection.
* The system assumes that users have access to compatible web browsers.
* The system assumes that users have basic computer literacy.
* The system assumes that users have necessary information for creating their accounts.
* The system assumes that users have the required equipment to complete their driving exams.
* The system assumes that the company may develop an app in the future.

### 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?*

* The DMV will change rules and requirements from time to time, therefore, we will need to be able to update the system accordingly.
* The end user’s internet connectivity can be a problem, so the tests should be downloadable.
* Timeline and budget are also limitations; we are on a timeline, but the client has not set a budget.
* Screen Size will also be a limitation due to mobile device use.

### 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.*

Chart, waterfall chart

Description automatically generated