# CS 255 Business Requirements Document

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?*

* This project aims to create a new system for DriverPass, a company that teaches people how to drive better. The system will help them manage their business smoothly and make it easier for their customers to learn driving.
* The client is DriverPass, run by Liam and Ian.
* They want a system where people can take driving classes and tests online.
* The system should let customers book driving lessons easily, either online, on the phone, or in person.
* Different people will use the system, like Liam, Ian, the secretary, and customers, each with different things they can do.
* The system needs to keep track of who books lessons and any changes they make.
* DriverPass offers different lesson packages with different features, and the system needs to handle those.
* Following the DMV rules is important, so the system needs to keep up with any changes.
* They might want to add more features later, so the system should be ready for that.

### 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 make learning to drive easier by offering classes online and helping people schedule driving lessons.
* They're trying to solve the problem of too many people failing their driving tests because current methods aren't working well.
* This system needs to have:
* Online classes and practice tests.
* A way for people to book driving lessons easily.
* Different user roles, like for staff and customers.
* Something to track bookings and changes.
* Options for different driving lesson packages.
* Updates from the DMV.
* An easy-to-use website.

### 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?*

* When the system is finished, it should:
  + Let people take driving classes and tests online.
  + Make it easy for customers to book driving lessons however they like.
  + Keep track of who's using the system and what they're doing.
  + Offer different kinds of driving lesson packages.
  + Stay up to date with driving rules and policies from the DMV.
  + Have a website that's easy to use and looks good.
* To make sure we get there, we need to:
  + Create a website for classes and tests.
  + Develop a system for booking lessons that's easy to use.
  + Set up a way to keep track of everything happening in the system.
  + Make sure the system can handle different lesson packages.
  + Make sure the system gets updates via integration with the DMV.
  + Design and test the website to make sure it works well for everyone.

## 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 DriverPass system needs to work online, so people can use it from any device with internet.
* It should be fast, loading pages quickly, ideally in under 3 seconds.
* The system should get updates often, at least once every two weeks.

#### 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 work on different kinds of computers, like Windows or Mac.
* It needs a good system to store and get information, like a big spreadsheet.

#### 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?*

* People distinction should be based on their names and/or email addresses.
* The system should understand if you type in upper case letters or not, however clear guidelines should be provided to the user regarding case sensitivity.
* If there's any critical problem or issue, the system should inform the admins immediately.

#### 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 should let the admin change what different user roles can do without needing to change the computer code.
* To adapt to platform updates, the system should follow the industry best practice and standards to be compatible with new operating systems.
* The IT admin needs full access to manage user accounts, reset passwords, and perform other administrative tasks necessary for maintaining the system's functionality and security.

#### 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?*

* People need to log in with a username and password to use the system.
* Secure connections between the client and server can be established using encryption protocols such as HTTPS to make sure data exchanged between them is encrypted and secure.
* In the event of a "brute force" hacking attempt, the system should put in measures such as account lockout or temporary suspension to prevent unauthorized access.
* If user forgets their password, they should be able to get a new one by answering some security questions or getting an reset link via 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 allow users to create accounts with unique usernames and passwords.
* The system shall authenticate user credentials during the login process.
* The system shall provide different levels of access based on user roles.
* The system shall allow users to schedule driving lessons online, over the phone, or in person.
* The system shall track reservations, modifications, and user activities for auditing purposes.
* The system shall offer various driving lesson packages with different features.
* The system shall integrate with the DMV to receive updates on regulations and policies.
* The system shall notify the administrator of critical issues or errors encountered.
* The system shall provide a mechanism for users to reset their passwords if forgotten.

### 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 interface should be easy for everyone to use for all type of users.
* The admin should be able to do tasks like manage users and view activity logs.
* The IT person should have additional privileges to be able to manage technical aspects of the system like manage servers and database.
* The secretary should be able to book lessons and see customer info.
* Customers should be able to book lessons, see what they've booked, and get learning materials.
* Customers should be able to use the system on computers or mobile phones.

### 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?*

* People using the system should know how to use websites and navigate through the booking systems.
* People using the system should have access to the internet on their computers or phones.
* The DMV should give reliable updates for the system to use.

### 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?*

* We might not have enough time or money that may impact the scope and scale of the system implementation.
* If lots of people start using the system, it might slow down.
* The system might not provide reliable information if the services we use such as integration with DMV aren't reliable or up to date.
* We need to make sure the system is safe from hackers, so it might need regular patches/updates to keep it secure.

### 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.*

