# 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 for this project is Liam, the owner of DriverPass. Liam would like us to design and implement a system that is capable of handling their business needs. Several use cases for this system include accessing data remotely via the internet, account creation and password recovery, reserving appointments with specific drivers and/or vehicles, and ensuring compliance with the latest DMV policies.

### 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?*

* The overall vision for DriverPass is to reduce the amount of driving test failures by offering specialized training for students prior to taking their first test. By providing online classes, practice tests, and on-the-road training, DriverPass believe they can leave students feeling adequately prepared and ready to past their driving test.

### 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?*

* There are several milestones that must be met before the system can be considered complete. They are described as follows:
  + All system data should be accessible whether online or offline. Updates or modifications however should require being online
  + Customers should be able to create accounts and reset their password when needed
  + Customers should be able to make a reservation for a driving lesson online by specifying the day and time of the lesson, or by calling the office
  + Customers should be prompted to provide their first name, last name, address, phone number, state, credit card number, expiration date, security code, pick up location, and drop off location when registering for a driving lesson package
  + Customers should be able to modify or cancel appointments online
  + The system should track which driver, time, and car each customer is assigned to
  + The system should track who made a reservation, who cancelled it, or who modified it lost. This information should be accessible via a printable activity report
  + At launch, the system should support three driving packages:
    - Package One: Six hours in a car with a trainer
    - Package Two: Eight hours in a car with a trainer, one in-person lesson
    - Package Three: Twelve hours in a car with a trainer, one in-person lesson, plus access to online class, content, and materials
    - Note that each driving lesson is two hours long, so time provided in purchased packages are split into multiple sessions
  + Internal users of the system should be able to disable driving packages as needed
  + Internal users of the system should be able to be assigned roles that allow for specific functionality within the system
  + Internal users of the system should be notified when the DMV issues any policy changes
  + The system should run off the web and over the cloud with minimal technical responsibilities
  + The system’s user interface should match the mockup provided by the client

## 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 needs to run in a web-based environment because it needs to be accessible via the internet. The system should run at a reasonable speed that can be obtained with an appropriate budget. Ideally pages would be able to load in 5-7 seconds on average. The system should be updated as security patches become available. The system will need to be backed up automatically, preferably once every 24 hours.

#### 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 in a web-based environment. The client did not specifically request an application for Android or iOS, so the system will run on the web and be available via a browser on desktop or mobile devices. The back-end will require a database to store customer information as well as appointments.

#### 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 actual users will be:
  + Liam, the CEO,
  + Ian, the IT Officer
  + The secretary
  + The end user
* These could be broken down into the following roles: Administrator, IT Officer, Customer Support, and Student. Each role will have specified permissions for the system. For example, the Administrator would have complete control over every part of the system and would be given to Liam, but the Customer Support role would not have as many permissions.

#### 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?*

* Changes can be made to the users without modifying the source code of the system. All accounts for the system will be stored within the system’s database with a specified role flag set. If need be, this role field in the database can be changed. This will allow the user to access different areas of the system without requiring a source code modification. An IT Officer would need the ability to modify system settings and perform updates. Updates should be handled manually by IT Officers.

#### 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?*

* All roles will require a username and password in order to be authenticated. The connection can be secured by using a SSL certificate, which will encrypt the data as it is exchanged between client and server. After three (3) unsuccessful log in attempts, the website should require a captcha puzzle to be solved for additional attempts. Should there be a total of ten (10) unsuccessful attempts, the account should be locked and an email sent to the email address on file indicating that they should reset their password. At any time the user can request a password reset link, even before the account were to be locked.

### 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 Students to create accounts.
* The system shall allow Students to update their information on file, such as name, address, email, and credit card information.
* The system shall allow Students to purchase driving packages.
* The system shall allow Students and Customer Support to register for appointments.
* The system shall allow Students and Customer Support to modify/cancel existing appointments.

### 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.)?*

* All Administrators, IT Officers, Customer Support, and Students will make use of the user interface. Students will need to be able to edit their account information, purchase driving packages, and register for dates/times. Customer Support will need to be able to schedule Student appointments, modify them, and cancel them. IT Officers will need to be able to access information about the system, including viewing Student account information and sending password reset links. Administrators will need full control over the system. All users will interact with the system via a web browser on desktop or mobile devices.

### 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?*

* I am assuming that the system will not need to accommodate a different type of user group other than what is available at launch. Furthermore, I am assuming that the user interface of the website will not be changing. As for things not specifically addressed in the transcript, I am assuming that only driving packages will be available for purchase, and that the site will not attempt to market any products of a different type.

### 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 time constraint on the project is 12 weeks, which poses a significant limitation in terms of features and debugging time available. Another limitation is that the user has a predetermined interface, so everything needs to be developed with that being non-negotiable. The development team for the project is small, so it is critical that development time not be wasted.

### 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 picture containing text, screenshot, number, diagram

Description automatically generated