# 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, DriverPass, is a company that helps new drivers pass their DMV road test
* They use online classes and practice tests
* There is optional on-the-road training for their customers
* DriverPass wants a system that has broad usage that includes internal data management (file storage, employee account management), customer appointments (online or calling in) and external management (customer accounts and DMV connection)

### 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?*

* System will need to store company files so that approved employees can download files and work on them offline before reuploading the file
* Employee account management
  + There are different levels of access based on the employee
  + The level of access needs to be changeable
  + Example given was for resetting passwords or blocking former employees
* Customer management
  + Digital form that will be filled out when a customer makes a driving lesson appointment
  + Function so that customers can modify their appointments
  + Full tracking of appointments including modifications and cancellations
  + Appointment information includes:
    - Type of appointment
    - Customer name (first and last)
    - Address (pickup, drop-off, and billing)
    - Phone number
    - State
    - Credit card number (including expiration date and security code)
    - Driving instructor (car comes with instructor)
    - Time of appointment
  + Tests that each customer has taken need to be linked to their account with information about the test results and time taken also stored
  + Notes from driving lesson appointments needs to be saved in the format shown in the interview
* Internal management
  + Function so that an appointment package can be removed as an option for the customer
  + Customer testing and past tests they have taken
  + Printable activity report
  + Cloud based website with minimal involvement from DriverPass
* External management
  + Customer accounts and ability to manage those accounts
  + Connection to DMV so that all training can follow up-to-date regulations
  + Notifications about changes from DMV

### 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 clients should be able to make, change and cancel driving appointments through the fully working website
* Clients should also be able to take online tests and view various pieces of information about past tests that they have taken
* There will also need to be various (two or more) types of accounts so that customers will not see what employees see
* The internal part of the system should allow for files to be downloaded and uploaded per Liam’s first request
* The system must also allow for access privileges for employees to be changed for individual workers
* Agile Methodology, such as Scrum, can be used to measure when an objective is complete

## 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 be web-based with cloud support for the website
* The system needs to be fast enough so that customers are happy with the systems' efficiency
* The system should be often if outside resources are used and when new features are implemented

#### 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 run on Linux if that is what is being used already but Windows also is a good option for additional support
* A cloud supported database can be connected to the system to save customer data and other booking information along with employee data

#### 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 should have a username and password that are unique
* Making those case-sensitive is important to reduce threats from brute force attacks
* There should be plans for implementing two-factor authentication to increase security
* If there is a problem in the system, then the admin should be informed immediately with information about the problem

#### 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 admin should have limited control over user changes
* The system should have account recovery for forgotten passwords
* The admin should only need to have full access to employees’ accounts
* IT should be able to change the system to make updates but not access customers’ personal information

#### 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?*

* Username and password are needed for log in
* If the system is on the cloud, then there should be a secure connection through the cloud support provider
* Brute force attacks should cause an account to lock up and force the actual user to change their password or contact the administrator to unlock their account
* The same email address that is used for creating the user account should be used for resetting a forgotten password

### 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 create lesson reservations made by customers
* The system shall validate user credentials when logging in
* The system shall provide support materials such as practice tests to customers
* The system shall pair a driving instructor to each booked appointment
* The system shall pair a car for each driving lesson
* The system shall have various access levels for customers, employees and admins
* The system shall have different lesson packages that customers can choose from

### 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 allow customers to make lesson appointments, take practice tests and take online classes
* Users can be customers, employees and admins
* Customers need to be able to make appointments and access support materials. Employees need to be able to see what appointments they have, and admins need to have access to employee accounts
* The interface should be compatible with various hardware but primarily will be access through a 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?*

* There is currently no budget for the system or technical requirements beyond functional requirements
* It is assumed that employees will be using the same system that customers use when they may only need a barebones system

### 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?*

* Limitations include the five-month time fame and unknown budget
* There is also a limitation that a database has not been set up to support the system yet

### 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.*

[Insert chart]