# 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?*

* Client – DriverPass, want to make a site that gives people access to take online classes for diving and have them take practice tests.
* Want a website where driving students can make reservations by day and time.
* Has three different appointment packages for customer to select that offer increment time of sessions spread across separate visits.
* Accessible from computer and mobile phone from anywhere. Run on the cloud.
* Wants update notifications from DMV website to remain up to date in training and sample questions.

### 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 system should be accessible anywhere online from mobile and computer.
* Wants the ability to download reports that can be viewed (example given excel).
* System will have different user access – Ian needs full access over account.
* Ian needs access to reset other user’s accounts for their password or block access to users that were terminated.
* Liam wants ability to track users who made reservations, who cancelled and who modified.
  + Wants this as an activity report.
* Wants ability to disable packages to prevent further registrations of that package.
* Ability to take reservations over the phone.
  + Information fields: First name, Last name, address, phone number, state, full CC info, customer pick up and drop off location.
* Needs to be connected to DMV to be updated with latest rules, policies and sample questions.
  + Would like system notification when there is an update.
* Wants system run from the web and be on the cloud. Does not want to deal with back-up and security.
* Interface on the web needs section to store info – Online test progress, driver notes, special needs, driver photo, student photo, full contact info - address info with first name, last name and email.
  + Drivers’ notes should show comments the driver left. Also show times for lessons. It should be displayed like a 3x4 table. Where column 1x1, 1x2, 1x3 and 1x4 have section names.

### 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?*

* System should be able to run fully off the cloud and accessible online from computer or mobile phone.
* Customers will be able to select from 3 different reservation packages online or in person. They will be able to select date and time after entering in their contact information and CC info.
* User reports will be printable for tracking reservation bookings, cancellations, and modifications.
* Ability to disable packages when classes are full or no longer offering.
* Reports can be pulled by selected users that can be exported to Excel.
* DMV rules, policies and sample questions are sync’d to the system that sends a notification when an update is required.
* Ian has access to reset passwords and remove users/block.
* Create Use Case Diagrams for customer booking appointments and DriverPass processing.
* Activity Diagrams for each use case on appointment selection and if this person is registering over the phone or online.
* Researching User Interface Designs.
* Testing system functionality and delivering the system.

## 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 will be a web-based application that is stored in the cloud.
* System will be accessible from computer and mobile phone.
* Automatically backup
* Easily scalable
* Reliability through cloud operating web app.
* Fast response time through web browser.
* System should send update notifications when DMV curriculum changes are made.

#### 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?*

* Web-based application from the cloud, will run in a browser.
* Cloud database storing customer 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?*

* Users will have unique usernames and passwords.
* Ian, IT officer, should be notified of problem immediately.
* Input should be case sensitive for better security of the online web-app.

#### 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?*

* Ian, admin, will need access to modify/remove users from the web app.
* System will need to have code added for removing package modules and adding new ones.
* Ability to disable packages without altering code.

#### 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/password for user access to the web-application.
* 2F-authentication can be added for additional security of customer data.
* Account should be locked after 3 attempts to login until Ian, the IT admin, can unlock the account.
* Admin will have to reset the password for users who forget their passwords.
* Customers should have ability to reset password automatically.

### 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 take appointments online from the customer.
* The system shall allow users to enter, modify, delete appointments.
* The system shall log all actions users modify to appointments.
* The system shall generate report in excel sheet.
* The system shall offer three packages to customers online.
* The system shall allow users to upload their documents.
* The system shall store all information and operate in the cloud.

### 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 will display online test progress.
* The interface will have customer name, address and contact information.
* The interface will show driver photo and student photo.
* The interface will have user logins for customer, driver, employees, administrators.
* Driver’s will be able to leave notes on the interface.
* Customer will be able to designate drop off and pick up location.
* Customers that unlock package 3 will have access to take online practice tests
* Customer can schedule driving appointments.
* Users will be able to interact via mobile browser and web 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?*

* 2FA backup user authentication for employees for security was assumed.
* Assuming the lock out after 3 attempts.
* How will customer information be handled once appointments/participation of the program are completed.
* The type of data privacy will be handled with the storing of full credit card information in an online cloud environment.
* How are payments processed online? Nothing mentioned about online order confirmations and receipts nor how any money will be transferred to the business via accounts.

### 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?*

* Resources will be limited based on the allocated space given from the cloud storage by DriverSpace.
* I am limited by time from building interface, linking the database and testing the system by a short window.
* Limited by expandability of the program for package offerings.

### 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