# 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?*

* DriverPass is the client they want to build a cloud web based application for their company. They want the ability to take customer information, customer products, schedule appointments, manage drivers and schedules, while also maintaining car scheduling.

### 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?*

* They noticed a market capacity for Drivers-Education and want to fill it. Again, system needs to be able to collect customer data like address, credit card information and name. Product information and purchases (the driver-ed packages). They need a client scheduling side where the customer can schedule appointments with their package (time and place). They need managing and scheduling of their business side drivers and cars.

### 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?*

* I picked some following quotes from Liam’s dialog and have them listed below:
* “I want to access data online from any computer or mobile device. I need to be able to download the reports and some information that I can work on at home, using Excel, for example”
* “I need to have full access over all accounts so I can reset them if someone forgets their password, or if we let go of someone and I need to be able to block their access.”
* “For tracking, I need to make sure I know who made a reservation, who canceled it, who modified it last. All this must be clear in case something goes wrong. I want to be able to print an activity report and figure out who is responsible.”
* “customers need to be able to make reservations for driving lessons”
* Customers “should be able to make this reservation online using their account. Or they could call or visit our office to schedule an appointment with our secretary”
* “identify the driver the customer is scheduled to go out with”
* “track which user is matched up with a certain driver, time, and car”
* “user to be able to make appointments, cancel, and modify appointments online if they wish”
* “I at least want to be able to disable a package if I don’t want any more customers to register for it”
* “If the customer forgets their password, we need them to be able to automatically reset it”
* “So we need to be able to be connected to the DMV so that they can update us with new rules, policies, or sample questions. We should get a notification whenever they have an update.”
* “The system needs to run off the web, preferably over the cloud.”
* “There should be an input form where the student (or secretary) fills in the student information, such as first name, last name, address, et cetera. There also should be a page for contacting us, and a way to contact the student.”

## 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?*

* There will need to be a database for the addresses, phone number, first/last names and multiple tables. Key/Value pairs for names, passwords, and usernames.
* Web based application for customers to purchase packages and schedule appointments
* Payment On/Off ramp for when customers purchase a package
* Internal web-based application for scheduling of drivers and cars
* Internal web-based application for administration
* API’s for the DMV updates
* System should be updating every 1-2 minutes in case a customer wants to cancel an appointment or something happens to a driver/car

#### 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?*

* Since external (customer facing product) is web based no need for operating platform constrains
* Should probably use AWS for cloud services
* Need a database as mentioned before for customer information
* Needs to be cross-platform meaning needs to be able to be accessed on a computer, tablet, or phone.
* Database should be MYSQL or Oracle

#### 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 username and password
* Input should be case-sensitive
* Should have security for SQL injections
* Admins should be informed immediately of a problem and where/who was responsible for 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?*

* I believe that it was mentioned in the dialog with Liam that first functionality will be able to prevent a customer from purchasing a certain package.
* Packages will be maintained on the internal Admin, this admin will only be accessible to certain team members.
* Code base should be maintainable and flexible, maybe use a “no-code” program overlay to allow admins to update website easily (Bubble, Webflow, HubSpot CMS). That or have easy to use radio buttons to flag (turn on or off) packages.

#### 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?*

* User needs username and password, should have 3 security questions to recover
* This was a big thing I was asking in the discussion board, what’s security looking like
* Need to protect from SQL Injections at the very least
* Any type of brute-force attack should result in the server being turned off and checked for vulnerabilities
* If user forgets password, should be able to answer 1 of 3 security questions and then promoted to change password. If password is changed it should notify the customer via text message or automated call (since client did not specify email) “This information would include their first name, last name, address, phone number, state, and their credit card number, expiration date, and security code”
* If customer can not remember security questions then two factor authentication should be in place

### 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 validate user credentials when logging in”

### 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.)?*

* Customers need to have a streamlined experience should be -> landing page -> login -> customer home page -> pack purchases -> payment screen. Or if customer has purchased a product already -> landing page -> login -> customer home page -> view or modify packages
* Admins need to be able to bring up customer information quickly so I suggest a table with account number, first name, last name, phone number, address, package purchased, time of appointment, the connected driver, and connected car. Table should have sorting functionality for each value. There should also be a search bar for Admins to quickly view information in the table. Once an account number is clicked on an Admin can edit or update information for customer account. There should also be a tracker for who updated the account.

### 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 security will be handled by AWS.
* I am assuming that there is no foul play be Admins.

### 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?*

* I feel like there would need to be multiple agile teams working on this project. For there to be an internal admin login, internal admin page, internal customer account editing page, internal package editor, external landing page, an external login page, external packages page, external payment page, external customer package editing page, I am sure I am forgetting pages as well. I think this is bigger than it first looks
* Time this could take weeks, to months to get fully operational
* Budget is a huge problem, AWS itself is not cheap nor is multiple agile teams (Dev’s, Automation QA, Data Scientist just a few roles needed).

### 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

Description automatically generated