# 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 project is for the client DriverPass.
* The purpose is to make an online environment where students can take steps to prepare themselves for the driving test.
* The students can create accounts where they can practice, take tests, and make and modify appointments based on their needs.

### 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 us to build a system that allows students to create accounts to allow them to take online driving classes, tests, and make appointments for on the road training.
* DriverPass sees a lack of training in the market for students seeking to take their driver’s test.
* The system will allow students to track their progress, see their matched driver along with their notes, see their personal information, along with their student photo.
* The system will consist in the cloud that way the client does not have to handle backup and security

### 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?*

* The system will provide the user with the following functions:
  + DriverPass will be able to:
    - Track who made reservations, canceled, or any modifications
    - Track which users are matched up with which driver, time, and car
    - Download reports and information
    - Disable a package
    - View student location for pickup/dropoff
    - Reset locked passwords for clients
    - Block clients who were let go
    - Integrate with the DMV so that new rules, policies, and sample questions can be updated
  + DriverPass clients will be able to:
    - Call and have their information uploaded via the secretary
    - Fill in their own information (first name, last name, address, phone number, state, credit card number, expiration date, security code)
    - Make appointments, cancel, or modify (date, time, and location of pickup/dropoff)
    - Choose from three offered packages

## 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 able to run on many different environments to reach as many people as possible, the environments include:
  + Web-based cloud environment compatible with:
    - Windows
    - Mac OS
    - IOS
    - Android
  + Applications for mobile use
* The system needs to run as instantaneously as possible due to:
  + Updated rescheduling
  + Cancelations
  + Updated policies or regulations for the DMV
  + Updated client information
* The system should be updated frequently regarding software, with adding or removing functionality as needed. Regarding frequent (weekly, bi-weekly, monthly) software updates:
  + Security Updates for OS/Cloud services
  + Data loss prevention
  + OS/Cloud services functionality
  + Updated, removed, or new DMV policies and regulations

#### 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 be able to run on as many platforms as possible to reach as many clients as possible, this includes platforms such as:
  + Windows
  + Mac OS
  + IOS
  + Android
* The back end, even though the client wants web-based cloud services should have a database for data protection and redundancy.
* The use of cloud-based services eliminates most of the back-end architecture.

#### 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?*

* There should be a minimum of two different types of users:
  + Administrators
  + Customers
  + Possible third for secretary usage (limited to scheduling and client information)
* Input should be case-sensitive for increased security.
* Inform admin of a problem if:
  + Passwords need to be reset
  + Regarding tracking:
    - Reservations, cancellations, and modifications so:
      * Activity reports are made to track who is responsible

#### 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 code is to be developed in a way (to avoid changing code) that users can:
  + Create user profiles
  + Update profile information
  + Add appointments
  + Modify appointments
  + Cancel appointments
* When it comes to adapting to platform updates, most of the back-end work will be done for the company, using the cloud service provider. More demanding updates that provide new functionality will have to be coded into the system if the client wants to stay up to date with ever changing technology.
* The IT admin needs full access to all the user’s accounts to be able to reset passwords, block accounts from use, and disable packages that are no longer available.

#### 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?*

* To login, the user either needs to setup an account if they have not, providing:
  + First Name
  + Last Name
  + Address
  + Phone number
  + State
  + Credit card information
  + Account Name
  + Password
* Or they must use their password if they are a returning customer.
* To make a connection secure between the client and the server, the user has to be authenticated, usually through use of their password which is then authenticated through encryption software.
* If there is a “brute force” hacking attempt on a user’s account, the account should lock after three tries. This should alert admin, which should lead to an email being sent out to the user letting them know an attempt to login to their account has been attempted. Once speaking to the user, and validating their information, the account can be unlocked with a recommendation to change their current password.
* If a user forgets their password they have immediate access to change their password through recovery methods linked to their email accounts with additional optional security measures before being able to do so such as secret questions, text to primary phone number, or both.

### 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 custom user profiles
* The system shall allow for different users with different permissions
* The system shall validate user credentials when logging in
* The system shall store user data to avoid loss
* The system shall seamlessly integrate between different operating platforms
* The system shall have an easy-to-use interface with guidance for users

### 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 needs of the interface are as follows:
  + Adapt to multiple platforms
  + Easy to follow guidance that navigates the user through operating the interface
  + Multiple sources of input such as:
    - Mouse
    - Keyboard
    - Touch Screen
  + Multiple pages to:
    - Setup account profiles
    - Update account profiles
    - Check online test progress
    - Driver notes
    - Special needs
    - Driver photo
    - Student photo
    - Set (add/modify/remove) pickup/drop-off locations
    - Schedule (add/modify/remove) lessons
* The different users for this interface are:
  + Owner/Admin
  + Secretary
  + Customer
  + Driver
* Owner/Admin need full access to block accounts, reset passwords, track user additions, modifications, and removals, along with printable reports
* Secretary with permissions to create accounts, add, remove, and modify information regarding customer information, lessons, and pickup/drop-off locations
* Customer needs to be able to create account, add, modify, and remove profile information, lessons, and appointments.
* Drive needs to be able to create an account, be notified of package information regarding the customer along with pickup/drop-off locations and updated changes to them.

### 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?*

* Additional functionality in the future and how to implement them was left out of the discussion for the current iteration of the system.
* This system assumes users have a phone, or access to the internet
* This system assumes users know how to navigate the interface

### 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?*

* As this system is meant to be cross-platform, having a single IT administrator handling all maintenance once the system is up and running may be difficult for them, depending on demand.
* Because this system is meant to reach as many platforms as possible, additional time, money, and technology may need to be used to meet the desires of the client, to allow for proper integration.
* The chance of underestimating timelines and dilemmas.
* The amount of demand the system will be under

### 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, timeline

Description automatically generated