# 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, wants to make a system that can handle a business based on bettering driver training.
* The purpose is to make sure that any data on customers, employees, and the cars can be accessed easily and securely.
* The project allows for:
  + different levels of service to be provided and to keep track of the information
  + making these lessons and scheduling easily accessible to customers

### 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 the system to:
  + display the different packages available
  + allow for scheduling
  + allow for admins on the account to monitor how the information is being used so they can provide driver training for those who need or want the extra help
* The problem the client wants to fix is the void in the market for training students in driving for the test at the department of motor vehicles
* The system is meant to make that training easy to purchase and to keep organized.
* The components needed for this system are:
  + storage for the user, employee, and car data
  + a website that can be accessed by users, employees, and admins
  + the ability to access any DMV requirements to provide the correct training

### 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 completed, it should be able to:
  + create user profiles
  + allow users to schedule appointments and packages
  + allow users access to parts of the platform they pay for
  + let employees access their schedule and change it when necessary
  + allow administrators to view changes made and reset or delete accounts.
  + display a sign-up page on the website to allow users to make profiles
  + make sure that it is possible to see a calendar of available appointments and to allow for changes to be made by those authorized to do so
  + host the online information and the car information so that it can be accessed on and offline.

## 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?*

* This system should be run on a website or an application that can create reservations and keep users in the system.
* The time it takes for the user to connect to the host should not exceed 10 seconds.
* The time it takes to navigate the pages of the website should not exceed 10 seconds.
* The system should update every time:
  + A user makes or changes an appointment
  + A trainer changes in their schedule
  + The DMV driving requirements change

Rationale: The system needs to be accessible by users on the internet whether the users are customers or admins. Therefore, the system being hosted on a website and/or an application will allow this access consistently. The system also needs to be fast enough that users don’t get frustrated while using the application to make an appointment or look at classes and decide somewhere else would be better. Finally, the system needs to update various data sources like schedules and appointments as they are made to avoid double-booking trainers. The system also must be up to date with any DMV requirements.

#### 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 capable of running on Windows, Mac, and Linux, or web-based browsing.
* The system requires:
  + A schedule database
  + A driving trainer database
  + A user database
  + A cloud system to run over

Rationale: The system is meant to run over the web, preferably over the cloud which means it should be capable of being run/accessed on any system that has the capability of web browsing, but primarily Windows, Mac, and Linux computers. The system needs databases to keep track of scheduling which would keep track of when appointments are made, when they are available, and with what driver and car they are available for. It also needs to keep track of the driving trainers for how long they’re working and what they are able to do. Another database would be used to keep track of user/customer data for payment and packages. Finally, the system is meant to run over the cloud so an appropriate cloud system would be used.

#### 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 will be given or be asked to make a case-sensitive username and password to log into the website.
* The system should inform the admin if:
  + It gets disconnected from the cloud
  + It has gotten an update from the DMV requirements
  + A customer requests support

Rationale: Different users having different usernames and passwords help to keep them from getting mixed up within the system and can be assigned a unique identifier that the system can use to find the account. The system should let the admin know of the above situations as they cause a disruption in service or mean that the website needs to be worked on and fixed.

#### 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 system should be able to do the following to users:
  + Add a customer or add to a customer’s record for progression
  + Remove a customer or user who has completed the course or asked to be removed
  + Modify customer records and information
  + Add or remove a new or old trainer
* The system will adapt to platform updates by running the updates while keeping a back up in case something goes wrong.
* The IT admin needs access to:
  + Customer account
  + Trainer accounts
  + Software updates

Rationale: The system needs to make those changes with a user without changing the code because these are typical and basic user changes for a customer and trainer. The system also needs to be able to adapt to platform updates as websites need to be adaptable to be used for longer periods of time. The IT admin needs access to those accounts and updates so they can change things as needed and assist those who have been locked out of their accounts.

#### 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?*

* Different users will have different accounts such as:
  + Customer accounts that have access to making appointments and paying for packages
  + Trainer accounts that have access to making their schedule and confirming appointments
  + Admin accounts that have access to customer and trainer accounts to provide support and security in the case of something going wrong
* The user will need a unique username and a password to log in.
* The connection will be secured using a standard firewall and bot detecting features.
* If there is a “brute force” hacking attempt:
  + The IT admin should be notified immediately
  + All information should be locked down
* If the user forgets their password there should be a way to either email the user a temporary new password or for the IT admin to fix the password for the user.

Rationale: Having different types of accounts adds security so people cannot access what they don’t need to access. Having a unique username and password helps keep the account individual. The use of a firewall and bot detecting features such as captcha can help secure accounts. Preventing a brute force hacking attempt is hard because it can happen to anyone so alerting the IT department and shutting down all access to information can protect it. Users forgetting a password happens often enough there should be an automated way for them to access a temporary password to reset their account.

### 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.
* The system shall update schedules.
* The system shall transfer payment to the company’s banking.
* The system shall show customers schedule options.
* The system shall produce a report of activity when an administrator requests it.
* The system shall show customers the following options: Create Account, Pay, Schedule Training, Take Class.

Rational: These are all options that the system shall do so that a user can do what they need to do with the system and website in general.

### 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 be a displayed website either via a browser or on a mobile device.
* The interface will allow a user to navigate to pages they have permissions for and manipulate these pages.
* The different users for the interface are:
  + Customers
  + Trainers
  + Administrators
  + IT Administrators
* Each user will need to be able to:
  + Access schedules
  + Access Packages
  + Trainers should be able to set their own schedules
  + Administrators should be able to access customer and trainer accounts
  + IT Administrators should be able to provide IT support as needed

Rationale: The interface needs to be useable on a browser or mobile device as this is how most users will access the website and use the program. The interface needs to allow users to navigate to different pages so they can use the various capabilities of the website. The different users will have different uses for the interface. Each user will have different access needs and have different roles for the website use.

### 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?*

* The user has a device for accessing the website.
* The user has access to the internet for accessing the website and cloud.
* The user has electricity to use their device.
* The website is connected to the internet.

Rationale: Without the above three things, the user will not be able to use the website at all. The website will also not be able to function if it isn’t connected to the internet itself.

### 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 system will stop functioning once electricity is lost.
* The system is not navigable with voice.
* The system will not cost more than customers it is being used for.
* The system will function as long as there is market demand.

Rationale: The system needs to be able to have electricity to work at all or the website will be useless. The system cannot take in voice commands or give out voice commands as that depends on the technology of the user. The system’s budget and resources will stop if the system isn’t being sustainably used. The system will be useless if there is no market demand for it.

### 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 screenshot of a project management

Description automatically generated