# 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 wants to take advantage of void in the market when it comes to training students for the driving test at their local department of motor vehicles (DMV).

### 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 want the system to the many students failing driving exams at the DMV, by providing training in the form of online classes and practice test.
* They want the system to allow customers to elect for on the road training options to prepare for when they are ready to get behind the wheel for testing.

### 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 should be able to help users access data from anywhere, online as well as offline.
* Data must be updated while online to prevent errors, and redundancy.
* Need to have the ability to assign roles with different levels of permissions to administrators to perform various admin actions.
* Auditing and logging should be present in order to see when changes are made to records like who made a reservation, who canceled it, who modified it last and all this must be clear in case something goes wrong. Should be able to print an activity report and figure out who is responsible.
* Customers should be able to make reservations for 2 hour driving lessons driving lessons, with the ability to choose what day and time works best for them. This should be performed by the customer within the online portal using their online created accounts. The system should also promote an option for customers that wish to call or visit the DoorPass office to schedule an appointment with the secretary.
* The system should be able to report the driver the student/customer is scheduled to go out with, and the assigned car’s make/model.

## 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?*

* System must web based, so this means it must be accessible and accessible from any web browser
* The system should be fast to load web pages, multi-media content, and account data quickly from the browser.
* The system should be scalable to handle high access rates when there happens to be a spike in requests for site content and data.
* Updates should be performed on a routine bases to keep the system operational and at peak performances.

#### 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 must run 100% utilizing a cloud platform such as AWS, Azure, or GCP depending on preference of the client.
* The system must run a series of virtual machines hosting windows server OS’s.
* 3 databases are required to store system data, store payment transactions, and store customer account details.

#### 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 must be able to create an account in the system in which actions can be logged under.
* Input validation will be required to the ensure data manually entered by users is valid for the system to process.
* System should notify IT admins when it’s functionality has been interrupted, due to a service failure or operational failure.

#### 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?*

* Users and system administrators should be able to make changes to their profiles based on roles and privileges.
* Platform updates in the cloud are scheduled by the cloud provider so system updates will be scheduled around the platform updates to maintain synchronous patching and updating plans. IT admins will require access specifically for manipulating site configurations.

#### 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?*

* Users will create sign in credentials when creating their profiles.
* The latest SSL/TLS encryption will be utilized to ensure web requests aren’t susceptible to being read in plain text.
* Lock outs will be implemented for all users and after 3 attempts the lock will be activated for a duration of 15 minutes.
* Users will be able to reset their password only if MFA requirements have been satisfied.
* Roles with various permission sets are required for administrators to perform user and system governance tasks.

### 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.”*

* System shall allow users to access data online, anywhere from any device. This can be online or offline.
* System shall perform updates to data only when it’s online to avoid duplicates in system entries.
* System shall provide online courses and exams to users.
* System shall make content and reports exportable to users in various file formats.
* System shall allow for users to purchase reservation packages online for driving lessons in person with an instructor.
* The system shall allow for authorized administrators to add/remove select packages if necessary.
* The system shall store user information including their first name, last name, address, phone number, state, and if preferred their credit card number, expiration date, and security code.
* System shall take users pick-up location and drop off location.
* The system shall stay up to date with changes made with local DMV’s.
* The system shall provide a page for users to contact the company and provide their details to be reached out to.

### 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 allow both standard users and administrators to login to the system but will provide different operational features to each group of users.
* The interface will be interacted with by users and administrators via touch screen or computer mouse.
* The interface will be displayed differently to fit mobile devices and desktop clients.
* The interface will display webpages with content loaded from external databases and servers.
* The user interface will display the course catalog in an interactive manner.
* Another display will be provided to the administrators to allow for site configurations and changes in color themes.
* Colors used on the storefronts interface must be uniform and not distract.
* The interface will display the history of completed exam for users, as well as current exams in progress.
* Input forms will be required for students to enter their information into system databases.

### 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?*

* Users should be aware of how to navigate the internet.
* Users should be aware of how to use mobile and computer devices.
* Users own either a mobile device or a computer.
* Users should be aware of the legal process required to be considered a licensed or permitted driver in their state.
* Users have an email and phone to complete the registration process for their system account.

### 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?*

* There will be resource limitations for staff handling the administration of the system.
* No system analyst/developer to perform the moving of system modules.
* There may be a budget limitation for implementing this system completely in the cloud depending on what functionality is required.

### 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 computer

Description automatically generated*