# 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 purpose of this project is to capitalize on the driver training market by assisting the company DrivePass. They would like to implement a variety of different things such as online courses that include tests and actual in person on the road driving training for their users.

### 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?*

* What the owner would like to accomplish what the DriverPass system would be to have the ability to utilize the application online and offline for users.
* The owner would also like to make this not only computer friendly but mobile friendly as well so users can utilize it wherever they are.
* The owner and potentially other administrative individuals would need the capability to have special administrative privileges which usually include access to report, blocking or granting access to people, viewing numbers such as users that are on the application, and the ability to do password recovery as well as other methods such as email recovery.
* DriverPass would need to have the capability to properly schedule reservations without the issues of them overlapping when it comes to doing this in person for the driving portion.
* The system needs to have the capability to adequately plan things such as location for the drive, time frames (2-hours long for each session), handle and properly secure personally information from users such as their address, phone number, card information, etc.
* The system also needs to be able to properly let the user choose what package they would like to utilize and to be able to properly give them what package they paid for and not the incorrect one.
* There also needs to be a log created that handles all the trainer’s information in correlation with the geographical location of the users to properly match them to a trainer nearest to them and then to properly portray the time frames to schedule appointments without the issue of overlapping time frames.
* The system needs to be able to track the time each user utilizes so that the user gets what they paid for, not more and not less than what was purchased with their corresponding package.
* DriverPass needs to ensure their practices are up to date with the current law, regulation, and practical test questions at the Department of Motor Vehicles.
* DriverPass’s online training and test needs to ensure that users can start where they left off, track progress, gives scores, benchmarks, and show the progression they need to obtain.
* There should be something to place for special accommodations for some customers such as being deaf, missing ligaments that may impact there driving arrangements, special needs, partial paralysis, etc. This could greatly impact the vehicle they need for this. For example, my co-worker is paralyzed from the waist down and she uses the steering wheel to accelerate and brake with a special tool. Things like these need to be considered so DriverPass can accommodate for every walk of life.
* DriverPass needs to utilize a cloud-based environment as this company is one that will continue to increase the amount of storage needed to properly hold all their data which makes this the cheapest, most effective, and secure option to do so.

### 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 goal is to have a satisfactory application that allows the users to effectively take the only training, schedule their driving portion, and track progress made online and in person for driving.
* We need to start off by making priority levels for this.
* A set timeline that takes into consideration potential issues, testing, and implementation times will be needed. I’d recommend mapping out a timeline for each thing to implement such as a weekly schedule.

## 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?*

* I would personally try to implement a web-based application just for simplicity purposes to get it pushed out. Upon the release of this we could consider maybe implementing an actual application down the road depending on the feedback we obtain from user-stories and such.
* The system should be essentially instantaneous to display results for the users utilizing the web-based environment.
* Another thing to add is to ensure it is optimized for mobile phones, tablets, and such for the web-based environment so it fits the users screen properly, so it is easier to navigate.
* Updates should be planned for once a week at minimum, obviously this may change depending on new guidance and updates from the Department of Motor Vehicles as well as new security updates or vulnerabilities that are discovered that are in need of immediate patching.

#### 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 run properly on mobile devices, chromebooks, windows, mac, and linux. There may be issues in optimizing for each browser to support it depending on some constraints, but it is a menial issue.

#### 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?*

* DriverPass should opt for users to have a generic username when creating an account that is changed when they first login.
* It should be case sensitive and require one upper-case, one lowercase, one number, one symbol, and a minimum of 12 characters for enhanced security practices and to negate the chance of the user becoming susceptible to any adverse action from cyber actors.
* If a user makes a set number of incorrect login attempts the user will be prompted to reset their password by recovering their account via email or sms which a preferred method, they would have put when the account was created.
* Security questions such as “where were you born?” should be utilized when logging in from a new device as well as 2FA that asked for a specified code via email or sms which they would have set up when the account was created.
* Due to some users changing phone numbers or not being able to recover accounts there should be a support team that helps recover accounts in these rare situations where some pieces of personal identifiable information is utilized for confirmation as well as security questions.

#### 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?*

* You should be able to make proper changes without effective the entirety of the system and just directly supporting that specified user.
* Regular updates that occur once a week should happen at a set date and time. Preferably at night for the corresponding areas on a set day so that it effects the minimal number of users. This should be as consistent as possible so users know when to expect downtime and they can plan accordingly.
* IT administrators need complete access for implementation and updates whether that is in the system, front-end site (website), and so on.

#### 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?*

* For the user to log in they need to have a unique username and password that meet the requirements I listed above in terms of minimal characters used and the requirement of symbols. This negates the chance of adverse cyber actors from infiltrating their accounts and as well the system.
* Utilizing cloud-hosting will afford the company DrivePass protection teams against cyber actors that utilize attacks such as brute-force attacks or DDoS attacks.
* If a user needs to reset a password they will do that using the 2FA method the opted to utilize which is email verification or sms verification as well the security questions they set upon creating the 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.”*

### 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 system shall be able to effectively display the user’s information, where they left off in terms of online courses and tests, have the special considerations listed such as disabilities, and the package they have.
* The system shall allow the user to schedule, reschedule, and cancel the in-person driving lessons in coordination with the testers schedule.
* The system shall allow students to utilize the online portal to take the courses, tests, and properly track their progress throughout the training.
* The system shall allow students to utilize the web-based application from any device and operating system, for example an android tablet, iPhone, Chromebook, Ubuntu (Linux), and a windows desktop. All of these should properly scale to the dimensions of the phone for the best user experience.

### 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 would assume the user shouldn’t need much help to navigate the site but if they do need help a navigational tutorial should be in place.
* I would assume the user wouldn’t have an operating system not listed above so compatability wouldn’t be an issue.

### 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?*

* Testing and debugging in the proper amount of time before release depending on the timeline may be an issue. We will most likely face issues with unknown bugs throughout the first couple months of release and due to user-stories we should get effect feedback.

### 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.*

Timeline

Description automatically generated