# **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 **of this project is** Driver Pass, they are wanting to use this project to create a system to administer new practice and real driving tests in order to improve the rates at which students pass.
* They are also hoping to better develop the system with online training and create a more seamless experience throughout.

### 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?*

* The problem which Driver Pass is wanting to help fix is the higher failure rates in driving tests among kids.
* One way in which Driver Pass is hoping to help fix the problem of high failure rates is with a database of both in person and online mentoring, as well as the ability to schedule practice drives.

Components needed.

* One component needed to help Driver Pass fix the problem is a user interface for the Driver Pass Employees and Students
* The Interface will allow for the Students and Instructors to access the different interfaces such as scheduling a drive or scheduling in person or online mentoring and accessing the material

### 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 Driver Pass’s site is finished, it should allow the students and Instructors to manage their data and resources online in a secure manner.
* The system should also provide the needed access to the training materials, have the ability to track their progress, and show their current grade.
* A key task that should be included is the method in which a student can schedule a lesson or drive and be able to download and use data offline.
* A second task that Driver Pass needs is for the development of a secure system which provides access based on roles such as student or faculty.
* The last task needed is to build an area for the instructors to manage the lessons, packages, and the student data.

## 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 are a few different environments that the system would need to be able to run in, these environments would be web based such any chrome-based browsers, firefox and mobile browsers.
* The system should be able to run and load pages properly at a decent enough speed in which to ensure that the customers or instructors are able to access the information they want without having an annoyance.
* The system should have small updates weekly or biweekly to help ensure that any security breaches or bugs in the code are fixed quickly and help make sure that customer data is protected.

#### 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 Windows, macOS, as well as have support for Linux.
* It should also be able to be accessed from any mobile browser such as safari on iOS.
* The back end would require some tools to support this such as a database in the form of MySQL which would be used to help manage the user data across the different platforms.

#### 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?*

* One way that is common in which you can distinguish between the different users is by their email addresses.
* Using this method would also require the user to have a certain password that goes along with the email and helps to verify the identity, as well as a way to verify the email.
* The input should be case-sensitive for the password but not for the email, this helps to ensure there is only one account under any certain email but also gives proper variety for the passwords.
* In the case that there is a problem such as a user inputting the wrong password multiple times in a row, the admin should be informed and the account locked.

#### 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?*

* In the system the admins would be able to modify the user information without changing the existing code, this is because it would simply be updating the database's information through the user interface.
* The system will adapt to the platform updates by having regular maintenance on the system itself, there could be certain standards set for how efficient the system needs to perform, and maintenance would ensure these are met even after platform updates to the environments.
* The IT admin would need to have access to the systems in the back end for servers and the databases, which are used to store and handle user information. This would be needed to help troubleshoot any issues with the servers.

#### 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?*

* Having a secure system to process and verify the email addresses with their respective passwords is required to create a system to log in.
* Multifactor authentication can also be set up to help ensure another layer of security against stolen passwords.
* For any data move between customers and the servers, the system should use HTTPS for encryption. This can help to prevent any interception of the data and keep the customers' data protected.
* If there is any brute force hacking attempt detected such as multiple failed log in attempts in a row, the account in question should be locked for either a certain amount of time or until a password reset.
* In order for a customer to reset their password in the case that they forget it or their account is locked, they should be able to receive an email with a link to create a new password.

### 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 the customers to create, modify, and cancel existing reservations.
* The system shall allow the customers to view their reservation history and progress.
* The system shall allow the admins to add, modify, or remove users such as customers, or drivers.
* The system shall allow the drivers to view their schedules and update their availability.
* The system shall send email notifications for the reservation confirmations and also send reminders.
* The system shall provide real-time reporting on user activity and lesson progress.
* The system shall ensure that payments are processed in a secure manner and stored safely.
* The system shall allow the customers to rate their driving lessons after they are completed.

### 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.)?*

* There are a few different needs of the user interface, each user will need to be able to view and manage their profile, or reservations.
* The customers should also be able to view their lessons and track their current progress.
* The Drivers should be able to modify their current availability.
* The administrators should be able to modify user information, add, and delete users.

### 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?*

* One assumption is that the Users will be able to access the internet in a working environment such as chrome.
* Another assumption made is that any guideline updates will also be reflected in the updates.
* It is also assumed that the system will work at any time of day.

### 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?*

* One limitation of the system is that some older environments or browsers may not work or function well in the current design parameters, as they may not be up to date.
* Another limitation is that the system is web based and requires the use of the internet.
* There could also be a storage limitation on how much the initial system is able to deal with, such as how many sign-ups or changes per second.

### 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.*

