**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 develop a system for DriverPass, a company specializing in driver training, to address the need for improved training for driving tests at the local Department of Motor Vehicles (DMV). The client, Liam, envisions a system that allows customers to take online classes, practice tests, and schedule on-the-road training sessions. The system should provide different training packages, user-friendly online reservations, secure data access, tracking of user activities, and compliance with DMV rules and updates.

**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 is seeking to improve the training of new drivers by addressing common challenges faced by individuals taking driving tests at the DMV. The envisioned system aims to provide comprehensive and easily accessible solutions such as including online classes, practice tests, and on-the-road training sessions, the duratipon of the accessability to which will depend on the purchased training package, of which there will be several. There should be a user-friendly reservation system for enhanced customer convenience. The system should also support different user roles, such the customer, admin, and owner. The data entered by users should remain confidential and secure. The system should track and reports user activities. It should also stay updated with DMV rules through a direct connection to the DMV.

**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 finished DriverPass system wants to aid people in their strive to master the rules of the road. It will have online classes, practice tests, and driving sessions. To make this happen, the task of creating an easy-to-use online class and test section should be undertaken. Additionally designing a system for booking driving sessions with preferred drivers and cars should also be made. The system will have secure user accounts with different roles for added safety. The goal is to make learning to drive smooth and accessible for everyone involved... As long as they pay.

**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 DriverPass system needs to run on the web, providing an online platform accessible from computers and mobile devices. It should run efficiently, ensuring quick loading times for a smooth user experience. Regular updates are crucial to keep the system aligned with the latest DMV rules and policies, and any modifications to enhance the user experience can be considered in future releases. These regular updates can happen once a day, as DMV rules do not always change.

**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 DriverPass system should be designed to run on multiple platforms, ensuring compatibility with various operating systems like Windows, Unix, and others to maximize user accessibility. The back end requires a large database capable of storing a large quantity of information, since all user interactions on the website will be monitored and most likely stored in that database.

**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?*

* To distinguish between different users, the system should implement unique usernames or user IDs, or both. Because the usernames or ID's will be unique, they should also be case sensitive. The system should inform the admin of any problem or critical issues as soon as it appears in real time, prompting for an immidiate response, such as restarting or updating the system.

**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 ability to make changes to users without altering code is usually managed through administrative interfaces or tools within the system, such as the pgAdmin tool I use to help me edit tables in my postgresql database. If DriverPass does not have that, the admins can simply access the database directly to update the data without touching the program's code. The system should be designed to adapt to platform updates by restarting with each update. The IT admin will most likely need full access to the code and database, which includes the ability to modify user roles, reset passwords, and perform maintenance tasks to ensure the system's smooth operation.

**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 log in, users will need a valid username and password. To secure the connection or to secure the exchange of data, encryptions like HTTPS (HTTP Secure) can be employed to encrypt data during transmission. In the case of a brute force hacking attempt (repeated login attempts), the account should be locked after a certain number of unsuccessful tries. If the user forgets their password, they can either contact the IT admin to request a password reset or follow the common password reset steps present in today's programs.

**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 access data online and offline via downloading results/data.
* The system shall prevent updating data without an online connection.
* The system shall validate user credentials when logging in.
* The system shall support different user roles, allowing the IT admin to have full access to all accounts and data.
* The system shall track and log user activities.
* The system shall allow users to make reservations for driving lessons online, providing options for selecting the day, time, and driver.
* The system shall display a clear record of reservations, including the driver assigned, time, and car details.
* The system shall accommodate different packages for driving lessons.
* The system shall include an input form for user registration, collecting information such as name, address, phone number, and credit card details.
* The system shall support password recovery for users who forget their passwords.
* The system shall ensure compliance with DMV rules by allowing updates from the DMV and notifying users of changes.
* The system shall have a cloud-based interface, providing accessibility from any device with a browser.
* The system shall feature a user interface with specific interactable activities, such as online tests.
* The system shall show activity reports, indicating test names, time taken, scores, and status for user tracking.
* The system shall be capable of future updates and modifications based on business needs.

**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 of the DriverPass system needs to cater to the needs of its users. The user base will consist of the IT admin and owner of DriverPass, both of whom will be admins with access to all content, including code, database contents, and simple website contents available to ordinary users. Aside from the admin users, there will be customers with limited access in the program. They will only be able to access and interact with the website's main contents, such as ordering driving lessons, taking tests, and other things that the website will have available for regular customers. The interface should be made with responsive design, which means that it changes according to the screen layout/size. The way they interact with the interface will be more or less identical across all platforms, as the content provided to each interface, such as a desktop or mobile, will be the same.

**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?*

* In the design I provided above, several aspects of the program were not explicitly addressed. The detailed features and functionalities accessible to customers, aside from ordering driving lessons and taking tests, were not specified. The specifics of how customers interact with the main contents, such as the user interface elements and user experience design, were also not detailed. Assumptions in the design include customers having basic internet access and the knowledge of how to interact with online platforms.

**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 plan for the DriverPass system has a few things to be aware of. Since the system relies on updates from the DMV, any changes on their end could affect how the DriverPass system works. There are also limitations in terms of time and budget. For example, finding drivers for hire that can tutor your students might be difficult, as it requires the drivers to know the rules of the road, as well as all/most of the laws pertaining to the road for the customer being tutored does not find the driver/teacher to be uneducated on the subject. The training of such drivers can be costly or timely, especially if the owner of DriverPass runs out of money by the end of the program's creation.

**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.*

