**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 design a comprehensive system for DriverPass, aimed at addressing the need for better driver training.
* The system intends to provide online classes, practice tests, and on-the-road training to prepare students thoroughly for driving tests.

**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 system should facilitate online classes, including video lectures and interactive modules, to enhance the theoretical knowledge of driving rules and regulations.
* Practice tests should be available to assess and reinforce students' understanding of driving concepts, providing a simulated exam environment.
* On-the-road training features should include a reservation system, driver tracking, and integration with the DMV for up-to-date rules and policies.
* Account management functionalities are required for users, administrators, and instructors, ensuring secure and personalized access to the system.

**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?*

* Enable online and offline access to training materials, allowing flexibility for users with varying internet connectivity.
* Ensure secure data access and storage to protect sensitive information such as user details, driving records, and payment information.
* Provide flexibility in customizing training packages, allowing users to choose the duration and content of their driving courses.
* Implement an efficient appointment scheduling system, allowing users to book driving lessons based on their preferences and availability.

**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 system should run efficiently in web-based environments, providing a seamless user experience.
* Response times for critical functions such as login and test submissions should be within three seconds.
* Regular updates to the system content should occur at least once a week to keep training materials current and aligned with DMV requirements.
* The system should have the capacity to handle concurrent user interactions, ensuring stability during peak usage times, such as evenings and weekends.

**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 compatible with major web browsers, including Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.
* Mobile platforms, such as iOS and Android, should be supported for a user-friendly experience on various devices.
* The back end of the system should utilize a robust database management system capable of handling large volumes of user data and transaction records.

**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?*

* The system should enforce strict data validation rules, including accurate user information and valid appointment details.
* Case sensitivity in user input should be maintained consistently throughout the system to prevent data discrepancies.
* Real-time notifications to the admin should occur for critical issues, such as failed login attempts or system errors.

**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?*

* User information changes, including additions, modifications, and deletions, should be manageable through a user-friendly interface without requiring code changes.
* The system should seamlessly adapt to updates in web browser technologies and versions, ensuring compatibility with the latest features and security measures.
* IT admin access should allow for routine maintenance tasks, including database optimization, security updates, and system monitoring.

**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?*

* User login credentials should be encrypted during transmission to prevent unauthorized access.
* Secure sockets layer (SSL) or equivalent encryption should be employed to protect data exchange between the client and server.
* Brute force attack prevention mechanisms should include account lockout after a specified number of failed login attempts.
* Password recovery mechanisms should follow industry best practices, such as email verification or security questions, to ensure the identity of the user attempting recovery.

**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.”*

* Validate user credentials during the login process to ensure secure access to individual accounts.
* Provide an online platform for users to schedule, modify, and cancel driving lessons.
* Allow users to view and track their driving lesson history, including details such as date, time, and instructor.
* Generate and display activity reports for administrators, highlighting user actions, reservations, modifications, and cancellations.
* Integrate with the DMV to receive updates on driving rules, policies, and sample questions for practice tests.
* Enable users to reset their passwords automatically if forgotten, ensuring a smooth account recovery process.

**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.)?*

* Cater to different user roles, including students, administrators, instructors, and the IT admin.
* Provide an intuitive and user-friendly design for easy navigation and interaction.
* Support both web-based and mobile access, ensuring flexibility for users with various devices.
* Include dedicated sections for scheduling driving lessons, accessing online classes, and taking practice tests.
* Display a dashboard for users to track their progress, view upcoming appointments, and access relevant information.

**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 have basic internet access to utilize online features.
* The DMV provides a reliable and accessible interface for integration purposes.
* Users are familiar with standard login processes and password recovery procedures.
* The system design aligns with legal and regulatory requirements for storing and handling user data.
* Users are comfortable with a standard interface design, and additional customization is not a primary concern.

**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 initial release may not include features for adding or removing modules without developer intervention.
* Customization of training packages may have limitations and require developer involvement.
* The system's adaptability to future features might be constrained based on the initial design choices.
* Resource limitations, including time and budget constraints, may impact the inclusion of advanced functionalities in the first release.
* The system may not cover potential changes in DMV rules or policies immediately due to update dependencies.

**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.*

