**CS 255 Business Requirements Document**

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 goal of this project is to provide a system for DriverPass, the client. DriverPass intends to address the demand for better driver training, specifically for persons preparing for their driving tests at the Department of Motor Vehicles (DMV). The client requests that the system provide full driver training services, such as online classes, practice tests, and on-the-road instruction.

**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 hopes that by giving online seminars, scheduling driving lessons, tracking client progress, and providing a user-friendly interface, the system can improve driver training. The goal is to increase the number of people who pass their driving tests at the DMV. Online lessons, practice tests, reservation administration, progress tracking, customer communication, user management, data security, DMV connection, and a user-friendly interface are all required system components.

**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?*

* Provide online driver training classes and practice tests.
* Enable customers to schedule driving lessons and make reservations.
* Track and record customer progress, including test results and lesson details.
* Facilitate communication between DriverPass and customers.
* Manage customer information, including personal details, pickup and drop-off locations, and payment details.
* Support different user roles and access levels for employees.
* Ensure data security and prevent data redundancy.
* Integrate with the DMV to stay updated on rule changes, policies, and sample questions.
* Offer a user-friendly interface with clear visuals and relevant information.
* Develop an online platform for driver training classes and practice tests.
* Implement a reservation management system with the ability to schedule driving lessons.
* Create a progress tracking module to record and display customer progress.
* Design a communication system to facilitate interaction between DriverPass and customers.
* Establish an integration framework to connect with the DMV for updates and notifications.
* Design an intuitive and visually appealing user interface for easy navigation and interaction.

**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?*

* To accommodate a broader range of users, the system must be mobile and web-based. The web-based application will be accessible via laptops and desktops. In addition, a mobile application should be created so that users can access the system on their smartphones and tablets.The response times should be quick and facilitate a seamless user experience. The loading and navigation processes should be optimized to minimize delays. The system should be updated frequently in order to improve its functionality, security, and user experience. It should be updated at least every three months in order to remain current and relevant.

**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 be cloud-based and Linux-based. The web-based client can also serve as the foundation for mobile devices. The site needs to be hosted by an Apache web server. MySQL or SQL would also be highly recommended for a 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?*

* The system should provide authorization and authentication methods for users. Provide each user with a distinct key. Each of the desired roles should have a certain number of attributes associated with it. Case-sensitive passwords are used to strengthen passwords. Depending on the specifications, emails and usernames should also be case-sensitive.

**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?*

* Using APIs, the front-end functionalities will be modular and allow for changes to be made without altering the back-end code. For the IT administrator, administrative privileges will allow them to manage the driverpass system. User management, system configuration, and monitoring and logging should be incorporated into access levels.

**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 security in the drivepass system, to ensure user authentication with logging in there needs to be valid credentials. The data transmitted should be through HTTPS/SSL/TLS. Making sure to encrypt the passwords stored in the database. For forgotten passwords, 2FA authentication can be used to ensure and extra layer of security and to help with resetting their passwords as well. CAPTCHA will help with bots and the like.

**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.”*

* Provide functionality for user registration, enabling individuals to create new accounts with unique usernames and passwords.
* Offer online practice exams that accurately mimic actual driving tests, with an extensive range of questions for complete preparation.
* Monitor and track the student's progress
* Secure payments
* Account lockout for unwanted attempts.
* Generate temp passwords for users for password recovery.
* Encourage the setting up of on-road training, enabling students to reserve practical driving sessions with certified instructors.

**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 user interface for both web-based and mobile applications must be intuitive. The navigation to the areas of interest should be clear and concise.
* The displayed information should be readily accessible to all users, including those with disabilities. A responsive design will ensure that the mobile and web-based experiences are comparable.

**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?*

* Internet connectivity was one aspect that was not addressed. Having access to a reliable internet connection will facilitate test taking and scheduling. Having the applications in the above design be user-friendly will allow even those with limited technological knowledge to utilize it.

**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?*

* I see budgetary constraints as one of the system's constraints. Without knowledge of the budget, some technologies may be less expensive than others. Time constraints are another factor. Certain features may take longer to implement than others. The required system resources can also restrict the types of developers and the number of implemented features.

**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.*

