**CS 255 Business Requirements Document Template**

**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 the project is to create a system that will offer online classes and in person driving classes to clients who are learning to drive. The client in this project is DriverPass who is being represented by Liam who owns the company.

**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 wants the system to provide practice tests, online classes, and in person driving classes. DriverPass aims to help new drivers with learning how to drive so that there are more people passing their drivers exam on the first go and so that they can be confident in their skills while driving. The system is going to need several different components. The system is going to need a good UI that anybody can use, an online classroom, and a scheduling system for any in-person driving practice.

**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?*

* Whenever this system is completed we should be able to schedule clients to drive around in-person with an instructor, complete any courses they sign up for, and a system where they can take online practice tests that closely resemble the ones you would see at the DMV. To measure the systems design and make sure it works properly along with being easy to navigate we would want to have some sort of prerelease where we can open it to a limited number of people and give them a survery to get feedback based on their experience.

**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 should be web-based to ensure it is accessible across all devices, as well as interoperability with the main internet browsers. The system should be as fast as possible, with an emphasis on speedy loading of virtual examinations and the scheduling of in person driving classes. The changing environment of driving legislation and DMV regulations will necessitate system changes, which will necessitate communication to the DMV for quick updates. To ensure top-notch performance, security upgrades, regular software updates , and functionality upgrades will be arranged, with measures made to avoid downtime and user disturbances.

**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?*

* To enhance accessibility for users, the DriverPass system should be built to work fluidly across several platforms, like Windows and IOS. The use of a flexible web-based infrastructure provides interoperability with a wide range of operating systems. To handle various functions such as account management, reservations, and shipping, the system's back end will require the use of a powerful database. The selection of a suitable database will be important to ensure effective storage, management, and retrieval, which will contribute to the application's success and stability.

**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 DriverPass system would use account names linked to their email address, to identify between various users, assuring accuracy in authentication for users. To improve accuracy in user authentication processes, login information will be case-sensitive. Any obstacles, such as failed login attempts, data discrepancies, or major failures, should be reported to the support team as soon as possible. This method guarantees that the support team is made aware of any issues as soon as they arise, allowing for quick responses while protecting and maintaining a strong security.

**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 DriverPass system should be built to support user administration, allowing the support team to edit user accounts without requiring changes to the core code. This versatility provides easy user management while also improving system adaptability. To enable for system changes, the system needs to be constructed so that it separates user capabilities from the core codebase, allowing for compatibility with different platforms or updates without requiring large code modifications. The IT administrator must have complete system access, being able to reset passwords, manage user accounts, and manage any technical updates required for maintenance.

**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?*

* The DriverPass system requires secure identifiers for users to login, like an email and password. The system will use encryption to safeguard the data flow between the client and the server. To prevent unauthorized access, the account should be temporarily disabled or locked after a specified number of failed login attempts. In the event that a password is forgotten, the system will provide a password recovery system that sends a link to reset the password to the email address associated with the account, assuring a safe and user-friendly approach.

**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.”*

* When logging in, the system needs to verify login information, demanding a safe password and username. It should allow support to add, remove, or edit user accounts without having to change the underlying code. The system must support the development of driving lesson bookings, scheduling, and determine the allocated time and person. It will provide an easy and user-friendly interface for scheduling online exams and in person driving sessions. The system will include security features such as encrypted data and account protection techniques such as temporary account lockdowns, as well as an efficient password restoration system.

**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 DriverPass system's user interface must meet the different needs of its users, which include the developers, support team, and clients. To maintain and update the system, including user accounts, IT requires full access. Customers should be able to simply access and engage with the platform for virtual practice examinations, in person driving scheduling, and account administration. The user interface should be built to work smoothly on a variety of devices, including computers and smartphones, in order to ensure accessibility for all 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?*

* The design implies that clients have consistent internet access in order to take online examinations and schedule in-person training. For the training sessions, we presume consumers have access to a vehicle that they can bring. Finally, the text expects that the DMV would provide the system with a realistic and secure means for receiving regular updates on driving rules and laws. These assumptions identify areas that may require more comprehensive planning and analysis during the actual setup.

**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 system design described above is extensive, it has its disadvantages. A disadvantage is assuming that users have universal access to dependable internet access, potentially omitting people with limited access to the internet. The design also presupposes that clients have their own automobiles for in person training, which might not be true for all users. Time restrictions may have an impact on the quality of the system deployment, and financial limits may have an impact on the addition of specific features. These limitations highlight the importance of continuous adaptation during the development phase in order to solve unknown problems and modify the system.

**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.*

[Insert chart]