**CS 255 Business Requirements Document**

**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?*

* To build a system for DriverPass that offers online and on-the-road driver training.
* The client, DriverPass, aims to prepare students better for DMV 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?*

* DriverPass seeks to provide comprehensive driving training through online classes, practice tests, and on-the-road training.
* Components include a user-friendly interface for reservations, a backend database, and a tracking system for user actions and reservations.

**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 users to make, cancel, and modify reservations for driving lessons online.
* Track user actions such as reservations made or canceled and modifications to bookings.
* Offer a variety of training packages and allow customization in the future.

**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 must be accessible online and support mobile devices.
* Real-time responsiveness with updates processed within seconds.

**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?*

* Should run on all major platforms (Windows, iOS, Android) and browsers.
* Backend requires a scalable database for user data and reservations.

**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?*

* User distinction via login credentials; system alerts for admin on significant issues or changes.

**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?*

* Admins can manage users and their roles without code changes.
* System designed for easy updates to comply with platform changes.

**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?*

* Secure login process with multi-factor authentication options.
* Encryption for data exchange; lockout mechanism for multiple failed login attempts.

**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 book, cancel, and modify driving lesson reservations.
* The system shall authenticate user credentials for login.
* The system shall provide an admin interface for comprehensive system management and tracking.

**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.)?*

* Must cater to different user roles: students, admin (IT officer), and secretary.
* Interactive web and mobile interface for booking and managing lessons.
* Displays progress, scores, and feedback for students' tests and lessons.

**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?*

* Stable internet for online functionalities.
* Users are familiar with basic web navigation and data entry.

**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?*

* Customization of training packages requires developer intervention.
* Dependent on external updates from the DMV for compliance.

**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.*

