System Components and Design

Purpose: The DriverPass project aims to create a comprehensive driver education system. The objective is to streamline the learning-to-drive process, making it more accessible and efficient for users.

System Background: The client has requested a system that facilitates user registration, lesson scheduling, progress tracking, and practice exams. Named DriverPass, this system will provide a structured and user-friendly environment for driver education. It will be accessible online through web browsers.

Objectives and Goals: The system will offer the following functionalities:

- User Registration
- Lesson Scheduling
- Progress Tracking
- Practice Exams
- User Feedback and Support

Requirements

Nonfunctional Requirements:

- The system must lock the user account after three failed login attempts.
- The system must support multiple languages to cater to a diverse user base.

Performance Requirements:

- The time to load any page of the system should not exceed 3 seconds.
- The system should handle up to 1,000 concurrent users without performance degradation.

Platform Constraints:

- The system will run on major web browsers such as Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.
- The system will be hosted on a cloud platform to ensure scalability and reliability.

Accuracy and Precision:

- The system should distinguish between different types of users such as students, instructors, and administrators.

- The system should accurately track and report user progress in lessons and practice exams.

Adaptability:

- The system should easily adapt to changes such as adding new features or updating existing ones without significant downtime.
- The system should support integration with third-party applications for extended functionality.

Security:

- The system must include strong user authentication mechanisms and secure data exchange protocols.
- The system must perform regular security audits and vulnerability assessments to identify and mitigate risks.

Functional Requirements:

- The system shall allow users to register with their personal information and create a profile.
- The system shall provide a scheduling interface for users to book driving lessons.
- The system shall track user progress and provide detailed reports on performance.
- The system shall offer practice exams and track results.
- The system shall include a feedback mechanism for users to report issues or provide suggestions.

User Interface:

- The user interface will consist of an intuitive dashboard for easy navigation.
- The system will include forms for user registration and lesson booking.
- The interface will display user progress reports and practice exam results.
- The system will support screen readers to assist visually impaired users.

Assumptions:

- Users have access to a device with internet connectivity.
- Users have basic computer literacy to interact with the online platform.

Limitations:

- The system does not include in-car driving lessons; it only supports the booking and tracking of lessons.

- The system will not function without an internet connection.
- The system does not support offline mode for practice exams or progress tracking.