Requirement Analysis - Buggy Cars Rating Application

This document outlines the requirement analysis for the **Buggy Cars Rating Application**. The system allows users to register, login, browse popular cars, vote for car models, and view overall ratings. The analysis covers the Home Page, Registration Page, and the overall rating system.

Functional Requirements

- Users should be able to register with the following mandatory fields: Login, First Name, Last Name, Password, and Confirm Password.
- System must validate that all mandatory fields are filled before allowing registration.
- Passwords must match in the Password and Confirm Password fields.
- Login (username/email) must be unique and not already registered.
- After successful registration, the user should be redirected to the login page or dashboard.
- Cancel button should clear the form or redirect to homepage.
- Users should be able to login with valid credentials (username and password).
- If incorrect credentials are entered, an error message should be displayed.
- Home page should display: Popular Make (car brand), Popular Model, and Overall Rating section.
- Users should be able to vote for cars after logging in.
- Overall rating should update dynamically based on user votes.
- Users should be able to comment on cars (if logged in).
- All registered users should be able to view the list of car models and their ratings.

Non-Functional Requirements

- The system should respond within 2-3 seconds for loading pages.
- Error messages should be user-friendly and displayed near relevant fields.
- Passwords should be masked during entry for security purposes.
- System should handle at least 100 concurrent user logins and votes without failure.
- The application should support modern browsers (Chrome, Firefox, Edge).
- The UI should be responsive and accessible across desktop and mobile devices.

Constraints

- Unique login credentials must be enforced at the database level.
- Password should follow minimum security rules (e.g., at least 6 characters, alphanumeric).
- Voting should be restricted to registered and logged-in users only.
- Each user can only vote once per car model.
- System must store and display accurate vote counts in real-time.

Assumptions

- Users will have stable internet access during registration, login, and voting.
- The application backend (API, database) will be available during testing.
- There are no advanced security features like CAPTCHA at this stage.
- The application data (votes, comments) will be persistent across sessions.