**מסמך זה באנגלית עקב ההערה בהגשה הקודמת שעדיף באנגלית.**

**גיט מצורף עקב ההערה <https://github.com/galogdan>**

**סטודנטים:**

**שם סטודנט: גל אוגדן**

**תעודת זהות: 205980485**

**שם סטודנטית: אוראל דיירי**

**תעודת זהות: 206992323**

**שם סטודנט: אורון מוזס**

**תעודת זהות: 314977810**

**Functional Requirements:**

1. User Authentication:
   * Users can register an account using their email and car ID.
   * Users can log in to their account using their credentials.
2. Car ID Based Chat:
   * Users can enter their car ID to join the chat corresponding to their car.
   * Users can send text messages in the chat room.
   * Users can receive real-time updates for new messages.
3. Car Selling/Buying:
   * Users can list their cars for sale, providing details such as make, model, year, price, and condition.
   * Users can search for cars listed for sale based on various criteria (make, model, price range, etc.).
   * Users can contact sellers through the application for inquiries or purchase negotiations.
4. Carpool Options:
   * Users can post carpool offers, specifying their starting location, destination, available seats, and departure time.
   * Users can search for carpool offers based on their own commuting needs.
   * Users can contact carpool offerers to join a carpool.
5. Profile Tab:
   * Users can view and edit their profile information, including name, contact details, and car details.
   * Users can upload a profile picture.
   * Users can view their activity history within the app (e.g., past car sales, carpool participation).
6. Notifications:
   * Users receive notifications for new chat messages, car sale inquiries, carpool requests, and other relevant activities.
   * Users can manage notification preferences in their account settings.

**Non-Functional Requirements**

Performance:

1. Real-Time Communication:
   * Chat messages should be delivered with minimal latency (< 1 second).
   * The system should be capable of handling concurrent chat sessions efficiently.
2. Response Time:
   * The application should respond to user interactions within 2 seconds on average.
   * The maximum acceptable response time for any action is 5 seconds.

Security:

1. Authentication and Authorization:
   * User authentication should be secure, employing industry-standard encryption techniques.
   * Access to certain features (e.g., selling cars, posting carpool offers) should require user authorization.
2. Data Protection:
   * User data should be stored securely, adhering to best practices for data protection.
   * Sensitive data transmission should be encrypted using HTTPS.

Reliability:

1. Availability:
   * The system should aim for at least 99% availability, allowing for scheduled maintenance downtime.
2. Backup and Recovery:
   * Regular backups of the database should be performed to prevent data loss.
   * Procedures for data recovery in case of system failures should be in place.

Usability:

1. User Interface:
   * The user interface should be intuitive and user-friendly, facilitating easy navigation.
   * Adequate feedback should be provided to users for their actions (e.g., successful car listing, error messages).
2. Compatibility:
   * The application should be compatible with popular mobile platforms (iOS, Android).
   * Responsive design principles should be followed to ensure usability across different screen sizes.