Report on Petition Web Application

Key Features

1. **Create a Petition**: Allows users to initiate new petitions.

2. **Sign a Petition**: Authenticated users can sign petitions, with a one-signature-per-user limit.

3. **List of Signed Petitions**: Users can view petitions they've signed, sorted by date.

4. **Top 100 Petitions**: Showcases the most popular petitions, sorted by date.

5. **Petition Tagging and Searching**: Facilitates categorization and searchability of petitions.

Technical Objectives and Architecture

- Platform: Google App Engine application.

- User Interface (UI): Developed using React.

  - The choice of React ensures a dynamic, responsive user interface that can efficiently update and render components based on user interactions and data changes.

- Backend Services: REST services created with Google Cloud Endpoints, likely in Java.

- Data Storage: Google Datastore, optimized for scalability and performance.

Application Flow

1. **For Users with an Account**:

   - **Login**: User authenticates with their credentials.

   - **List of Petitions**: Browse available petitions.

   - **Interactions**:

     - **Sign a Petition**: Participate in a chosen petition.

     - **Create a Petition**: Initiate a new petition.

2. **For New Users:**

   - **Register**: New users sign up, providing necessary details.

   - **Login**: Authenticate with the newly created credentials.

   - **List of Petitions**: Access the list of available petitions.

   - **Interactions**:

     - **Sign a Petition**: Engage with existing petitions.

     - **Create a Petition**: Start a new petition.

Conclusion

This web application is tailored for an engaging and efficient user experience in managing petitions. Using React for the front-end development ensures a high-performing, interactive interface. Combined with Google App Engine and Cloud Endpoints for backend services, the application is primed to be scalable, secure, and compliant with data privacy standards, effectively catering to both casual users and those deeply involved in advocacy and social causes.