

keta_haru Documentation

- *Repository:** sach1nkhatri/keta_haru

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Overview

<think>

Okay, I need to create a comprehensive documentation chapter for the Keta Haru repository based on the provided code snippets. Let me start by understanding what's required.

First, the user wants an overview of the repository and introduction. The task mentions covering all relevant code examples and explanations with proper structure. They also specified using markdown formatting, including code blocks, and being thorough but concise.

Looking at the source files provided, there are several CSS files, React components like LandingPage.jsx and LoadingSpinner.jsx, some configuration files (firebase.json, manifest.json), and test files. The README.md gives project setup info.

The overview section should explain the purpose of the repository. From the code, it seems to be a React app for a chat application called Keta Haru. The App.js is a basic React component with a link to learn React, which might be a placeholder. The LandingPage.jsx has UI components and uses context for authentication. There's also a LoadingSpinner component.

The architecture section needs to describe the structure. It looks like it's using Create React App, so the standard folder structure applies: src contains features, components, css, etc. Firebase.json is for hosting configuration. Public directory holds static files like index.html and manifest.json.

Components & Modules should detail each major part. For example, LandingPage.jsx uses useAuth

from context, has UI elements with CSS from AuthPages.css. LoadingSpinner.jsx is a reusable component that takes size and color props. The CSS files define styles for these components, including responsive design and dark mode support.

Usage examples might include how to use the LoadingSpinner component in different sizes or colors. Technical details could cover error handling, but looking at the code, there's not much explicit error handling mentioned except maybe in tests.

I need to make sure I don't add any information not present in the context. For example, if a file isn't mentioned, I shouldn't assume its existence. Also, note that some parts like the App.js might be placeholders since they reference "Learn React" which is from Create React App's default setup.

Now, structuring all this into sections as per the required format: Title, Table of Contents, Overview with purpose and tech stack, Architecture & Design explaining structure and patterns, Components & Modules detailing each part with code examples, Usage Examples showing how to use components, Technical Details on error handling and performance, and Summary with key takeaways.

I should check that all files mentioned in the context are covered. The CSS files for spinner, search bar, message list, etc., need descriptions of their classes and responsive design elements. Also, the firebase.json and manifest.json have specific configurations that should be noted.

Make sure code blocks are properly formatted with language tags (like css, jsx). Avoid markdown decorations like emojis or lists unless specified. Keep the tone professional and direct as per instructions.

</think>

Overview

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Overview

Purpose and Scope

The **Keta Haru** repository is a React-based application designed as a real-time chat platform for users to connect, communicate, and collaborate. It includes core features such as authentication, user interface components (e.g., loading spinners, search bars), and responsive design elements tailored for modern web applications.

High-Level Description

The project leverages **Create React App** as the foundation, with modular organization of code into `features` directories (e.g., `auth`, `dashboard`). It includes:

- A landing page with interactive UI components.

- Aut

Key Technologies Used

- **React** (for component-based UI development)

- **C**

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Architecture & Design

Overall Structure

The project follows a standard Create React App structure:
...

```
src/  
??? features/      # Feature-specific modules  
?  ??? auth/       # Authentication-related components and context  
?  ??? dashboard/  # Dashboard UI components and styles  
??? components/    # Reusable UI components (e.g., LoadingSpinner)  
??? css/           # Global and feature-specific CSS files  
??? App.js         # Root application component  
??? App.test.js    # Unit tests for the root component  
...
```

Design Patterns

- **Component-Based Architecture**: Each feature is encapsulated into modular components.

- **Component**

Component Relationships

- The ``LandingPage`` component depends on the ``useAuth`` context for user status and navigation logic.

- UI components
CSS

- --

Components & Modules

3.1 ``LoadingSpinner`` Component

- **Purpose**: Renders a loading spinner for UI feedback during asynchronous operations.

```

```jsx
// src/features/auth/components/LoadingSpinner.jsx
import React from 'react';
import './css/LoadingSpinner.css';

const LoadingSpinner = ({ size = 'medium', color = 'primary' }) => {
 return (
 <div className={`loading-spinner ${size} ${color}`}>
 <div className="spinner"></div>
 </div>
);
};

export default LoadingSpinner;
```

```

- ***Parameters***:

- `siz

- ***Dependencies***:

- Sty

- --

3.2 `LandingPage` Component

- ***Purpose***: Displays the application's landing page with branding, features, and CTA buttons.

```

```jsx
// src/features/auth/components/LandingPage.jsx
import React from 'react';
import { useNavigate } from 'react-router-dom';
import { useAuth } from '../context/AuthContext';
import LoadingSpinner from './LoadingSpinner';
import './css/AuthPages.css';

const LandingPage = () => {
 const navigate = useNavigate();
 const { user, loading } = useAuth();

```

```

if (loading) return <LoadingSpinner />;
if (user) navigate('/dashboard');

return (
 <div className="landing-page">
 { /* UI Elements: Hero Section, Features, CTA Buttons */ }
 </div>
);
};

export default LandingPage;
...

```

- **\*Dependencies\***:

- `us

- --

### 3.3 CSS Styling Files

**Example: `LoadingSpinner.css`**

```

```css
.loading-spinner {
  display: flex;
  align-items: center;
  justify-content: center;
}

.spinner {
  border: 3px solid #f3f3f3;
  border-top: 3px solid #6366f1;
  border-radius: 50%;
  animation: spin 1s linear infinite;
}
...

```

- ***Key Features***:

- Res

Example: `SearchBar.css`

```
```css
.search-input {
 width: 100%;
 padding: 0.75rem 1rem;
 border-radius: 0.75rem;
 transition: all 0.3s ease;
}
```
```

- ***Responsiveness***:

- Me

- --

3.4 Configuration Files

`firebase.json`

```
```json
{
 "hosting": {
 "public": "build",
 "site": "ketaharu",
 "rewrites": [
 { "source": "**", "destination": "/index.html" }
]
 }
}
```
```

- ***Purpose***: Configures Firebase Hosting to serve static files from the `build` directory.

`manifest.json`

```
```json
{
 "name": "Create React App Sample",
 "icons": [...],
 "start_url": ".",

```

```
"theme_color": "#000000"
}
```

- **\*Purpose\***: Defines metadata for Progressive Web App (PWA) features like icons and theme colors.

- --

## Usage & Examples

### 4.1 Using the Loading Spinner

```
```jsx
import LoadingSpinner from './components/LoadingSpinner';

// Example: Medium-sized spinner with primary color
<LoadingSpinner size="medium" color="primary" />
```
```

- **\*Output\***: A rotating circle (32px diameter) with a blue border.

- --

### 4.2 Customizing UI Components

To customize the `SearchBar` component:

```
```css
/* Override default styles in your CSS file */
.search-input {
  background-color: #1a202c;
}
```
```

- **\*Result\***: Changes the search input's background to dark mode styling.

- --

## Technical Details

### 5.1 Error Handling and Edge Cases



- **Loading State**: `LandingPage` handles loading states gracefully by rendering a spinner.

## 5.2 Performance Considerations

- **CSS Optimization**: Modular CSS files reduce global style conflicts and improve maintainability.

## Summary & Notes

### Key Takeaways

- The project is a modular React app with clear separation of concerns via features and components.

### Potential Improvements

- Add TypeScript for type safety.

## Architecture

- Error generating content: 'str' object has no attribute 'get'

## Core Components

- Error generating content: 'str' object has no attribute 'get'

## API Reference

<think>

Okay, I need to create a comprehensive documentation chapter for the "API Reference" section based on the provided code. Let me start by understanding what's given.

First, looking at the files listed, there are several React components and some configuration files.

The main focus here is on API endpoints and interfaces, but from the code provided, I don't see any actual REST APIs or backend services. Instead, there's frontend code using React Router for navigation, Firebase integration (from the package.json), and some UI components.

Wait, the user mentioned "API endpoints and interfaces" in the context of this chapter. But looking through the files, most are frontend-related: App.jsx, LandingPage.jsx, components like MessageList, CSS files, etc. There's a firebase.json, which might relate to Firebase hosting, but not backend APIs. The package.json shows dependencies including Firebase, so maybe there's some Firebase API usage in the code.

Looking at src/features/auth/context/AuthContext.js isn't present here, but there are imports from it in App.jsx and other files. So perhaps the AuthProvider and useAuth hook interact with Firebase Authentication. Similarly, ChatProvider might handle real-time messaging via Firebase Firestore or Realtime Database.

But since the actual API code (like endpoints) isn't provided in the context, I need to document what's available based on the existing code. The user might be referring to the frontend APIs, like the components and hooks that act as interfaces for authentication and chat features.

So, structuring the documentation:

1. Title: API Reference
2. Table of Contents with sections.
3. Overview explaining purpose (frontend APIs for auth and chat), technologies used (React, Firebase).
4. Architecture & Design: Frontend structure using React Router, context providers for state management, Firebase integration.
5. Components & Modules: Document each major component like App, ProtectedRoute, LandingPage, MessageList, etc., their props, methods, dependencies.
6. Usage Examples: How to use the components, e.g., routing setup with ProtectedRoute.
7. Technical Details: Error handling (like loading states), edge cases (no messages in MessageList).
8. Summary: Key points about the frontend APIs and potential improvements.

I need to make sure not to invent any backend endpoints since they aren't present. Focus on the frontend interfaces and components that act as APIs for authentication, routing, and chat features.

</think>

## API Reference

- - -

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## Overview

### Purpose and Scope

This documentation covers the frontend API endpoints and interfaces for a React-based chat application named **Keta Haru**. The system includes authentication, routing, UI components, and real-time messaging features built using modern web technologies.

### High-Level Description

The application is structured around:

- **React Router**: For client-side navigation between landing pages, sign-up/login forms, and protected dashboard routes.

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### Key Technologies/Frameworks Used

- **React** (version 19.1.1) with React Router DOM (v6.30.1)

- **F**

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## Architecture & Design

### Overall Structure

The application follows a **component-based architecture** with:

1. A central `App.jsx` file managing routing and context providers.

2. Modular features (e.g., auth, chat) encapsulated in separate directories (`src/features/...`).
3. Shared UI components and styles organized by feature.

## Design Patterns Used

- **Context API**: For global state management of authentication (`AuthContext`) and chat data (`ChatContext`).

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## Component Relationships

- `App.jsx`: Orchestrates routing and context providers.

- `Au`

## Data Flow

1. User navigates to a route (e.g., `/dashboard`).
2. `ProtectedRoute` checks authentication status via `useAuth`.
3. If authenticated, the `Dashboard` component is rendered.
4. UI components like `MessageList` fetch and display data from Firebase or local state.

- --

## Components & Modules

### 1. **App.jsx**

- **Purpose**: Central routing and context provider setup.

```
```jsx
import React from 'react';
import { BrowserRouter as Router, Routes, Route, Navigate } from 'react-router-dom';
import { AuthProvider, useAuth } from '../features/auth/context/AuthContext';
import { ChatProvider } from '../features/chat/context/ChatContext';
import LandingPage from '../features/auth/components/LandingPage';
import SignUpPage from '../features/auth/components/SignUpPage';
import LoginPage from '../features/auth/components/LoginPage';
import Dashboard from '../features/dashboard/components/Dashboard';
```

```
import LoadingSpinner from '../features/auth/components/LoadingSpinner';
```

```
// Protected Route component
```

```
const ProtectedRoute = ({ children }) => {  
  const { isAuthenticated, loading } = useAuth();
```

```
  if (loading) {
```

```
    return (
```

```
      <div style={{
```

```
        display: 'flex',
```

```
        justifyContent: 'center',
```

```
        alignItems: 'center',
```

```
        height: '100vh'
```

```
      }}>
```

```
        <LoadingSpinner size="large" />
```

```
      </div>
```

```
    );
```

```
  }
```

```
  return isAuthenticated ? children : <Navigate to="/login" replace />;  
};
```

```
function App() {
```

```
  return (
```

```
    <AuthProvider>
```

```
      <ChatProvider>
```

```
        <Router>
```

```
          <div className="App">
```

```
            <Routes>
```

```
              <Route path="/" element={<LandingPage />} />
```

```
              <Route path="/signup" element={<SignUpPage />} />
```

```
              <Route path="/login" element={<LoginPage />} />
```

```
              <Route
```

```
                path="/dashboard"
```

```
                element={
```

```
                  <ProtectedRoute>
```

```
                    <Dashboard />
```

```
                  </ProtectedRoute>
```

```
                }
```

```

    />
    <Route path="" element={<Navigate to="/" replace />} />
  </Routes>
</div>
</Router>
</AuthProvider>
</AuthProvider>
);
}

export default App;
...

```

- ***Dependencies***: `react-router-dom`, `AuthContext`, `ChatContext`.

- --

2. ****ProtectedRoute Component****

- ***Purpose***: Conditionally render routes based on authentication status.

```

```jsx
const ProtectedRoute = ({ children }) => {
 const { isAuthenticated, loading } = useAuth();

 if (loading) {
 return (
 <div style={{
 display: 'flex',
 justifyContent: 'center',
 alignItems: 'center',
 height: '100vh'
 }}>
 <LoadingSpinner size="large" />
 </div>
);
 }

 return isAuthenticated ? children : <Navigate to="/login" replace />;
};
...

```

- **\*Behavior\***: Displays a ``LoadingSpinner`` while authentication status is being checked. Redirects unauthenticated users to ``/login``.

- --

### 3. **\*\*LandingPage.jsx\*\***

- **\*Purpose\***: Display the application's landing page with features and CTA.

```
``jsx
import React from 'react';
import { useNavigate } from 'react-router-dom';
import { useAuth } from '../context/AuthContext';
import LoadingSpinner from './LoadingSpinner';

const LandingPage = () => {
 const navigate = useNavigate();
 const { user, loading } = useAuth();

 if (loading) {
 return <LoadingSpinner />;
 }

 if (user) {
 navigate('/dashboard');
 return null;
 }

 return (
 <div className="landing-page">
 { /* Content */ }
 </div>
);
};

export default LandingPage;
...

```

- **\*Behavior\***: Redirects authenticated users to ``/dashboard``. Displays a ``LoadingSpinner`` while checking authentication status.

- --

#### 4. **\*\*LoadingSpinner.jsx\*\***

- **\*Purpose\*\***: Display a loading spinner with customizable size and color.

```
```jsx
import React from 'react';
import './css/LoadingSpinner.css';

const LoadingSpinner = ({ size = 'medium', color = 'primary' }) => {
  return (
    <div className={`loading-spinner ${size} ${color}`}>
      <div className="spinner"></div>
    </div>
  );
};

export default LoadingSpinner;
```
```

- **\*Props\*\***:

- `siz

- --

#### 5. **\*\*MessageList.jsx\*\***

- **\*Purpose\*\***: Render a list of messages for a chat interface.

```
```jsx
import React from 'react';
import { useAuth } from '../auth/context/AuthContext';
import Message from './Message';

const MessageList = ({ messages, contact, isDarkTheme }) => {
  const { user } = useAuth();

  if (!messages || messages.length === 0) {
    return null;
  }
}
```



```

return (
  <div className="message-list">
    {messages.map((message) => {
      const isOwnMessage = message.sender === user.uid;
      const senderName = isOwnMessage ? 'You'
        : (contact.type === 'group' ? message.senderDisplayName : contact.displayName);

      return (
        <Message
          key={message.id}
          message={message}
          isOwnMessage={isOwnMessage}
          senderName={senderName}
          isGroup={contact.type === 'group'}
          isDarkTheme={isDarkTheme}
        />
      );
    })}
  </div>
);
};

export default MessageList;
...

```

- ***Props***:

- --

6. ****Firebase Configuration****

- ***File:** `firebase.json`

```

{
  "hosting": {
    "public": "build",
    "site": "ketaharu",
    "ignore": [

```

- `me

```js

```

 "firebase.json",
 "**/*.\"",
 "**/node_modules/**\"
],
 "rewrites": [
 {
 "source": "**",
 "destination": "/index.html"
 }
]
}
}
...

```

- **Purpose**: Configure Firebase Hosting for the application. Key settings include:

- `pu

- --

## 7. **Manifest Configuration**

- **File**: `public/manifest.json`

```jso

```

{
  "short_name": "React App",
  "name": "Create React App Sample",
  "icons": [
    {
      "src": "favicon.ico",
      "sizes": "64x64 32x32 24x24 16x16",
      "type": "image/x-icon"
    },
    {
      "src": "logo192.png",
      "type": "image/png",
      "sizes": "192x192"
    },
    {

```

```

      "src": "logo512.png",
      "type": "image/png",
      "sizes": "512x512"
    }
  ],
  "start_url": ".",
  "display": "standalone",
  "theme_color": "#000000",
  "background_color": "#ffffff"
}
```

```

- **\*Purpose\***: Define metadata for progressive web app (PWA) features:

- Icon

- --

## 8. **\*\*Routing Configuration\*\***

- **\*File\***: `src/app/App.jsx`

```jsx`

```

import React from 'react';
import { BrowserRouter as Router, Routes, Route, Navigate } from 'react-router-dom';
import { AuthProvider, useAuth } from '../features/auth/context/AuthContext';
import { ChatProvider } from '../features/chat/context/ChatContext';
import LandingPage from '../features/auth/components/LandingPage';
import SignUpPage from '../features/auth/components/SignUpPage';
import LoginPage from '../features/auth/components/LoginPage';
import Dashboard from '../features/dashboard/components/Dashboard';
import LoadingSpinner from '../features/auth/components/LoadingSpinner';
import './App.css';

```

// Protected Route component

```

const ProtectedRoute = ({ children }) => {
  const { isAuthenticated, loading } = useAuth();

```

```

  if (loading) {
    return (
      <div style={{

```

```

        display: 'flex',
        justifyContent: 'center',
        alignItems: 'center',
        height: '100vh'
    }}>
    <LoadingSpinner size="large" />
</div>

);
}

return isAuthenticated ? children : <Navigate to="/login" replace />;
};

function App() {
  return (
    <AuthProvider>
      <ChatProvider>
        <Router>
          <div className="App">
            <Routes>
              <Route path="/" element={<LandingPage />} />
              <Route path="/signup" element={<SignUpPage />} />
              <Route path="/login" element={<LoginPage />} />
              <Route
                path="/dashboard"
                element={
                  <ProtectedRoute>
                    <Dashboard />
                  </ProtectedRoute>
                }
              />
              <Route path="*" element={<Navigate to="/" replace />} />
            </Routes>
          </div>
        </Router>
      </ChatProvider>
    </AuthProvider>
  );
}

```

```
export default App;  
...
```

- ***Explanation***: This file defines the main application component with:

- Aut

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9. ****Authentication Flow****

The application uses a custom authentication flow implemented through:

1. `AuthProvider` in `src/features/auth/context/AuthContext`
2. `useAuth` hook for accessing authentication state
3. Redirect logic in `ProtectedRoute` component

- ***Key components***:

- Lan

- --

10. ****UI Components****

The application includes several UI components with specific styling:

- ***LoadingSpinner.jsx***

```jsx

```
import React from 'react';
import './css/LoadingSpinner.css';

const LoadingSpinner = ({ size = 'medium', color = 'primary' }) => {
 return (
 <div className={`loading-spinner ${size} ${color}`}>
 <div className="spinner"></div>
 </div>
);
};

export default LoadingSpinner;
...
```

- \*Styling in `src/features/auth/css/LoadingSpinner.css`:\*\*

```
.loading-spinner {
 display: flex;
 align-items: center;
 justify-content: center;
}

.spinner {
 border: 3px solid #f3f3f3;
 border-top: 3px solid #6366f1;
 border-radius: 50%;
 animation: spin 1s linear infinite;
}
...
```

- --

## 11. \*\*Dashboard Components\*\*

The dashboard includes several styled components:

- \*SearchBar.css\*\*

```
.search-bar {
 position: relative;
 width: 100%;
}

.search-input {
 width: 100%;
 padding: 0.75rem 1rem;
 padding-left: 2.75rem;
 border: 1px solid #d1d5db;
 border-radius: 0.75rem;
 font-size: 0.875rem;
 background: white;
 color: #374151;
 transition: all 0.3s ease;
}
...
```

- **\*Header.css\***

```
.dashboard-header {
 display: flex;
 justify-content: space-between;
 align-items: center;
 padding: 1rem 1.5rem;
 background: white;
 border-bottom: 1px solid #e5e7eb;
 box-shadow: 0 1px 3px 0 rgba(0, 0, 0, 0.1);
}
```

- **\*Dashboard.css\***

```
.dashboard {
 height: 100vh;
 display: flex;
 flex-direction: column;
 background: #f8fafc;
}

.dashboard-header {
 background: white;
 border-bottom: 1px solid #e5e7eb;
 padding: 1rem 1.5rem;
 display: flex;
 align-items: center;
 justify-content: space-between;
}
```

- --

## 12. **\*\*Landing Page Components\*\***

The landing page includes several styled components:

- **\*LandingPage.jsx\***

```
import React from 'react';
```

```
import { useNavigate } from 'react-router-dom';
import { useAuth } from '../context/AuthContext';
import LoadingSpinner from './LoadingSpinner';
import '../css/AuthPages.css';
```

```
const LandingPage = () => {
 const navigate = useNavigate();
 const { user, loading } = useAuth();

 if (loading) {
 return <LoadingSpinner />;
 }

 if (user) {
 navigate('/dashboard');
 return null;
 }

 return (
 <div className="landing-page">
 {/* Background Elements */}
 <div className="background-shapes">
 <div className="shape shape-1"></div>
 <div className="shape shape-2"></div>
 <div className="shape shape-3"></div>
 <div className="shape shape-4"></div>
 </div>

 {/* Content */}
 ...
 </div>
);
};
```

```
export default LandingPage;
...

```

```
- *LandingPage.css**
```

```
.landing-page {
```

```
```css
```



```

min-height: 100vh;
background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
display: flex;
align-items: center;
justify-content: center;
padding: 2rem 0;
}

.landing-content {
  text-align: center;
  color: white;
  max-width: 800px;
}
...

- --

```

13. ****Testing Components****

- ***App.test.js***

```

import { render, screen } from '@testing-library/react';
import App from './App';

test('renders learn react link', () => {
  render(<App />);
  const linkElement = screen.getByText(/learn react/i);
  expect(linkElement).toBeInTheDocument();
});
...

- --

```

14. ****Firebase Configuration****

- ***firebase.json***

```

{
  "hosting": {
    "public": "build",
    "site": "ketaharu",

```

```

"ignore": [
  "firebase.json",
  "**/*.*",
  "**/node_modules/**"
],
"rewrites": [
  {
    "source": "**",
    "destination": "/index.html"
  }
]
}
}
```

```

- --

## 15. **\*\*Manifest Configuration\*\***

- **\*public/manifest.json\***

```

{
 "short_name": "React App",
 "name": "Create React App Sample",
 "icons": [
 {
 "src": "favicon.ico",
 "sizes": "64x64 32x32 24x24 16x16",
 "type": "image/x-icon"
 },
 {
 "src": "logo192.png",
 "type": "image/png",
 "sizes": "192x192"
 },
 {
 "src": "logo512.png",
 "type": "image/png",
 "sizes": "512x512"
 }
]
}

```

```js

```
],  
"start_url": ".",  
"display": "standalone",  
"theme_color": "#000000",  
"background_color": "#ffffff"  
}  
```\n
```

- --

## 16. **\*\*robots.txt Configuration\*\***

- **\*public/robots.txt\***

```\ntxt

<https://www.robotstxt.org/robotstxt.html>

User-agent: *

Disallow:

```\n

- --

## 17. **\*\*Project Dependencies\*\***

- **\*package.json\***

```\njs

```
{  
  "name": "ketaharu",  
  "version": "0.1.0",  
  "private": true,  
  "dependencies": {  
    "@testing-library/dom": "^10.4.1",  
    "@testing-library/jest-dom": "^6.7.0",  
    "@testing-library/react": "^16.3.0",  
    "@testing-library/user-event": "^13.5.0",  
    "firebase": "^12.1.0",  
    "react": "^19.1.1",  
    "react-dom": "^19.1.1",  
    "react-router-dom": "^6.30.1",  
    "react-scripts": "5.0.1",  
    "sweetalert2": "^11.22.4",  
  },  
}
```

```

    "web-vitals": "^2.1.4"
  },
  ...
}
...

```

- --

18. **Other Files**

- *public/index.html**

```

<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <link rel="icon" href="%PUBLIC_URL%/favicon.ico" />
    <meta name="viewport" content="width=device-width, initial-scale=1" />
    <meta name="theme-color" content="#000000" />
    <meta
      name="description"
      content="Fully Free Chat App For Sachin and his friends"
    />
    <link rel="apple-touch-icon" href="%PUBLIC_URL%/logo192.png" />
    <link rel="manifest" href="%PUBLIC_URL%/manifest.json" />
    <title>Keta Haru</title>
  </head>
  <body>
    <noscript>You need to enable JavaScript to run this app.</noscript>
    <div id="root"></div>
  </body>
</html>
...

```

- *src/App.test.js**

```

import { render, screen } from '@testing-library/react';
import App from './App';

test('renders learn react link', () => {

```

```html

```js

```

render(<App />);
const linkElement = screen.getByText(/learn react/i);
expect(linkElement).toBeInTheDocument();
});
```

```

- \*src/features/dashboard/components/MessageList.jsx\*\*

```

import React from 'react';
import { useAuth } from '../../auth/context/AuthContext';
import Message from './Message';
import './css/MessageList.css';

const MessageList = ({ messages, contact, isDarkTheme }) => {
 const { user } = useAuth();

 if (!messages || messages.length === 0) {
 return null;
 }

 return (
 <div className="message-list">
 {messages.map((message) => {
 const isOwnMessage = message.sender === user.uid;
 const senderName = isOwnMessage ? 'You'
 : (contact.type === 'group' ? message.senderDisplayName : contact.displayName);

 return (
 <Message
 key={message.id}
 message={message}
 isOwnMessage={isOwnMessage}
 senderName={senderName}
 isGroup={contact.type === 'group'}
 isDarkTheme={isDarkTheme}
 />
);
 })}
 </div>
);
}

```

```jsx

```
);  
};
```

```
export default MessageList;  
````
```

```
- *src/features/auth/components/LandingPage.jsx**
```

```
```jsx
```

```
import React from 'react';  
import { useNavigate } from 'react-router-dom';  
import { useAuth } from '../context/AuthContext';  
import LoadingSpinner from './LoadingSpinner';  
import '../css/AuthPages.css';
```

```
const LandingPage = () => {  
  const navigate = useNavigate();  
  const { user, loading } = useAuth();
```

```
  if (loading) {  
    return <LoadingSpinner />;  
  }
```

```
  if (user) {  
    navigate('/dashboard');  
    return null;  
  }
```

```
  return (  
    <div className="landing-page">  
      { /* Background Elements */}  
      <div className="background-shapes">  
        <div className="shape shape-1"></div>  
        <div className="shape shape-2"></div>  
        <div className="shape shape-3"></div>  
        <div className="shape shape-4"></div>  
      </div>
```

```
      <div className="landing-container">  
        <div className="landing-content">  
          { /* Hero Section */}
```

```
<div className="hero-section">
  <div className="hero-badge">
    <span className="badge-icon">?</span>
    <span className="badge-text">Now with Real-time Chat</span>
  </div>
```

```
<div className="hero-main">
  <div className="hero-logo">
    <div className="logo-glow"></div>
    <svg width="100" height="100" viewBox="0 0 24 24">
      { /* SVG content */ }
    </svg>
  </div>
```

```
<h1 className="hero-title">
  <span className="title-line">Connect.</span>
  <span className="title-line">Chat.</span>
  <span className="title-line highlight">Collaborate.</span>
</h1>
```

```
<p className="hero-subtitle">
```

Experience the future of communication with Ketaharu's cutting-edge real-time messaging platform Built for modern teams who demand speed, security, and seamless collaboration

```
</p>
```

```
<div className="hero-stats">
  <div className="stat-item">
    <div className="stat-number">10K+</div>
    <div className="stat-label">Active Users</div>
  </div>
  <div className="stat-item">
    <div className="stat-number">99.9%</div>
    <div className="stat-label">Uptime</div>
  </div>
  <div className="stat-item">
    <div className="stat-number">50ms</div>
    <div className="stat-label">Message Speed</div>
  </div>
</div>
```

</div>

</div>

{/* Features Section */}

<div className="features-section">

<div className="section-header">

<h2 className="section-title">Why Choose Ketaharu?</h2>

<p className="section-subtitle">Built with modern technology for the best user experience</p>

</div>

<div className="features-grid">

<div className="feature-card">

<div className="feature-icon-wrapper">

<div className="feature-icon">

{/* SVG icon */}

</div>

</div>

<h3 className="feature-title">Lightning Fast</h3>

<p className="feature-description">Real-time messaging with sub-50ms delivery Experience conversations that flow naturally without delays.</p>

<div className="feature-highlight">? Ultra-low latency</div>

</div>

<div className="feature-card">

<div className="feature-icon-wrapper">

<div className="feature-icon">

{/* SVG icon */}

</div>

</div>

<h3 className="feature-title">Smart Connections</h3>

<p className="feature-description">Intelligent friend management with seamless requests, approvals, and relationship tracking.</p>

<div className="feature-highlight">? Smart networking</div>

</div>

<div className="feature-card">

<div className="feature-icon-wrapper">

<div className="feature-icon">

{/* SVG icon */}


```
</div>
</div>
<h3 className="feature-title">Modern Design</h3>
<p className="feature-description
```

Usage Examples

<think>

Okay, I need to create a comprehensive documentation chapter for the "Usage Examples" section of the Keta Haru project. Let me start by reviewing all the provided code files and understanding their roles.

First, looking at the `**LoadingSpinner.css**` file. It defines styles for a loading spinner component with different sizes and colors. This is used in the application to indicate loading states. I should document this as part of UI components, explaining how it's applied in different contexts like small, medium, large, and color variations.

Next, `**App.test.js**` contains a test case for the App component using React Testing Library. The example tests if the "learn react" link is present. This shows how to write unit tests for React components, which is important for the testing section of the documentation.

The `**firebase.json**` file configures Firebase Hosting settings. It's crucial for deployment, so I need to explain the hosting configuration, public directory, site name, and rewrite rules. This helps developers set up their own Firebase hosting correctly.

In `**public/manifest.json**`, there are web app manifest details like icons, start URL, theme color, etc. This is part of PWA setup, so documenting how to configure the manifest for progressive web app features would be useful.

The `**GroupMembersModal.jsx**` file is a React component that manages group members. It uses hooks like `useState` and `useEffect`, interacts with context providers (`useChat` and `useAuth`), and includes functionality for adding/removing members. I need to break down its structure: props, state management, lifecycle effects, and how it integrates with other parts of the app.

- `*Dashboard.jsx*` is another key component that serves as the main dashboard interface. It uses multiple hooks, context providers, and manages UI states like theme toggling, sidebar visibility, and mobile responsiveness. Documenting its structure, event handlers, and integration with other components (like Sidebar and ChatWindow) will be important.

The `**Sidebar.jsx**` file contains the sidebar component with tabs for friends and groups, search functionality, and contact management. It uses context from `useChat` and includes UI elements like `SearchBar` and `ContactItem`. Explaining its structure, how it interacts with the Dashboard, and

handling user interactions would be necessary.

- `*robots.txt*` is a simple file that allows all crawlers to access the site. This is straightforward but important for SEO considerations.

In `**package.json**`, dependencies and scripts are listed. Documenting the project setup, including key libraries like React, Firebase, and testing tools, will help new developers set up the environment correctly.

The `**SearchBar.css**` file styles the search bar component used in the Sidebar. It includes responsive design elements for different themes (light/dark). Explaining how to use this component and its styling is part of UI documentation.

- `*public/index.html*` sets up the basic HTML structure, including meta tags, icons, and manifest links. This is essential for PWA setup and should be documented as part of project configuration.

Finally, `**MessageList.jsx**` renders messages in a chat interface, using context from Auth and props passed down from parent components. It's important to explain how it maps messages, determines ownership, and applies styling based on theme.

Now, structuring the documentation chapter:

1. **Overview**: Explain the purpose of this section, which is to provide usage examples and tutorials for the Keta Haru application.
2. **Architecture & Design**: Discuss the overall structure, using React components with context API, Firebase integration, and modular design.
3. **Components & Modules**:
 - GroupMembersModal: Break down its props, state, functions, and how it interacts with other modules.
 - Dashboard: Explain its role, state management, UI elements, and interactions.
 - Sidebar: Detail its components like SearchBar, ContactItem, and group management.
 - MessageList: Describe message rendering logic and integration with Auth context.
4. **Usage & Examples**:
 - Testing Example using App.test.js
 - Firebase Hosting Configuration in firebase.json
 - PWA Manifest setup in manifest.json
5. **Technical Details**: Error handling in GroupMembersModal, edge cases like empty friend lists, performance considerations for large groups.
6. **Summary & Notes**: Key takeaways about component structure, testing practices, and deployment configurations.

I need to ensure that each section is clear, uses proper markdown formatting, includes code blocks

with syntax highlighting where necessary, and avoids any assumptions not present in the provided files. Also, check for consistency in terminology and make sure all examples are accurately represented.

</think>

Usage Examples

- --

1. Overview

- ***Purpose and Scope***
- ***High-Level Description***
- ***Key Technologies/Frameworks Used***

- --

2. Architecture & Design

- ***Overall Structure***
- ****UI Components****: Reusable elements like `LoadingSpinner`, `SearchBar`, and modals.
- ***Design Patterns Used***

- ***Component Relationships***

- ***Data Flow***

1. Context updates propagate to dependent components via state subscriptions.
2. Context updates propagate to dependent components via state subscriptions.
3. Firebase services handle data persistence and retrieval.

- --

3. Components & Modules

****GroupMembersModal Component****

- ***Purpose***

- ***Properties***

- ***Methods***

loadGroupMembers(): Loads group members from context

handleAddMember(friendId): Adds a friend to the group

handleRemoveMember(memberId): Removes a member from the group

...

- ***Dependencies***

- ***Code Example***

```
<GroupMembersModal
  isOpen={isGroupModalOpen}
```

```
onClose={() => setIsGroupModalOpen(false)}
group={selectedGroup}
/>
...

```

****Dashboard Component****

- ***Purpose***

- ***Key Features***

- ***State Management***

```
const [isDarkTheme, setIsDarkTheme] = useState(false);
const [sidebarCollapsed, setSidebarCollapsed] = useState(false);
...

```

- ***Code Example***

```
<Dashboard
  isDarkTheme={isDarkTheme}
  onToggleTheme={handleToggleTheme}
/>
...

```

****SearchBar Component****

- ***Purpose***

- ***CSS Classes***

- ***Code Example***

```
<SearchBar
  value={searchTerm}
  onChange={setSearchTerm}
  onSearch={handleSearch}
  isDarkTheme={isDarkTheme}
/>
`
```

****MessageList Component****

- ***Purpose***

- ***Key Logic***

```
const isOwnMessage = message.sender === user.uid;
const senderName = isOwnMessage ? 'You' : contact.displayName;
`
```

- ***Code Example***

```
<MessageList
  messages={chatMessages}
  contact={selectedContact}
  isDarkTheme={isDarkTheme}
/>
`
```

- --

4. Usage & Examples

****Testing with React Testing Library****

- ***Example: Rendering App Component***

```
import { render, screen } from '@testing-library/react';
import App from './App';
```

```
test('renders learn react link', () => {
  render(<App />);
  const linkElement = screen.getByText(/learn react/i);
  expect(linkElement).toBeInTheDocument();
});
...

```

****Firebase Hosting Configuration****

- *File: `firebase.json`*

```
{
  "hosting": {
    "public": "build",
    "site": "ketaharu",
    "rewrites": [
      {
        "source": "**",
        "destination": "/index.html"
      }
    ]
  }
}
...

```

```js

## **\*\*PWA Configuration\*\***

- \*File: `public/manifest.json`\*

```
{
 "name": "Create React App Sample",
 "icons": [
 {
 "src": "logo192.png",
 "type": "image/png",
 "sizes": "192x192"
 }
],
 "start_url": ".",

```

```js

```
"display": "standalone"
```

```
}
```

```
...
```

```
- --
```

5. Technical Details

****Error Handling****

- Network errors in `loadGroupMembers` are caught and displayed to the user

- For

****Edge Cases****

- Empty friend lists in `GroupMembersModal`

- Mo

****Performance Considerations****

- Debounced search functionality (not explicitly shown but implied)

- Me

```
- --
```

6. Summary & Notes

- ***Key Takeaways***

- The

- ***Potential Improvements***

- Add

- ***Important Considerations***

- The

Usage Examples

1. Overview

Purpose and Scope

This chapter provides practical examples of how to use the codebase in a real-world scenario, focusing on key components like modals, search functionality, theming, and responsive design patterns.

High-Level Description

The documentation covers usage scenarios for:

- Group management modal

- Das

Key Technologies Used

- React (version 19.1.1)

- Fire

- --

2. Architecture & Design

Overall Structure

The application follows a component-based architecture with:

- Centralized state management using context API

- Mo

Design Patterns Used

- **Context API**: For managing global state (authentication, chat)

- **C**

Component Relationships

- `Dashboard` component orchestrates the main application flow

- `Gr

Data Flow

1. User interacts with UI (e.g., opens modal)
2. State updates are managed through context hooks (`useAuth`, `useChat`)
3. Components re-render based on updated state
4. API calls are made to Firebase for data persistence

- --

3. Components & Modules

****GroupMembersModal.jsx****

- ***Purpose****:

Man

- ***Properties and Methods****:

- `isC

- ***Dependencies****:

- `use

- ***Code Example****:

```jsx

```
import React, { useState, useEffect } from 'react';
import { useChat } from '../chat/context/ChatContext';
import { useAuth } from '../auth/context/AuthContext';
```

```
const GroupMembersModal = ({ isOpen, onClose, group }) => {
 const { friends, addMemberToGroup, removeMemberFromGroup, getGroupMembers } =
 useChat();
 const { user } = useAuth();
```

```
 // State management for modal
```

```
 const [groupMembers, setGroupMembers] = useState([]);
```

```

const [searchTerm, setSearchTerm] = useState("");
const [isLoading, setIsLoading] = useState(false);
const [error, setError] = useState("");

useEffect(() => {
 if (isOpen && group) {
 loadGroupMembers();
 }
}, [isOpen, group]);

// Load group members from Firebase
const loadGroupMembers = async () => {
 if (!group) return;

 setIsLoading(true);
 try {
 const members = await getGroupMembers(group.groupId);
 setGroupMembers(members);
 } catch (error) {
 console.error('Error loading group members:', error);
 setError('Failed to load group members');
 } finally {
 setIsLoading(false);
 }
};

// Add member to group
const handleAddMember = async (friendId) => {
 if (!group) return;

 setIsLoading(true);
 setError("");

 try {
 await addMemberToGroup(group.groupId, friendId);
 await loadGroupMembers(); // Reload members
 } catch (error) {
 setError(error.message || 'Failed to add member');
 } finally {

```

```

 setIsLoading(false);
 }
};

return (
 <div className="group-members-modal-overlay" onClick={onClose}>
 {/* Modal content */}
 </div>
);
};
...

```

## **\*\*Dashboard.jsx\*\***

- **\*Purpose\*\***:

Main

- **\*Properties and Methods\*\***:

- `isD

- **\*Dependencies\*\***:

- `us

- **\*Code Example\*\***:

```jsx

```

import React, { useState, useEffect } from 'react';
import { useAuth } from '../auth/context/AuthContext';
import { useChat } from '../chat/context/ChatContext';

```

```

const Dashboard = () => {
    const { user, logout } = useAuth();
    const { selectedFriend, selectedGroup } = useChat();

```

// State management

```

const [showProfileModal, setShowProfileModal] = useState(false);
const [isDarkTheme, setIsDarkTheme] = useState(false);

```

// Theme toggle handler

```

const handleToggleTheme = () => {
  const newTheme = !isDarkTheme;
  setIsDarkTheme(newTheme);

  if (newTheme) {
    document.body.classList.add('dark-theme');
  } else {
    document.body.classList.remove('dark-theme');
  }
};

return (
  <div className={`dashboard ${isDarkTheme ? 'dark' : ''}`>
    {/* Header with user info and theme toggle */}

    <div className="dashboard-content">
      {/* Sidebar component */}

      {/* Chat window component */}
    </div>

    {/* Profile modal component */}
  </div>
);
}
...

```

****Sidebar.jsx****

- ***Purpose****:

- ***Properties and Methods****:

- ***Dependencies****:

- ***Code Example****:

Left s

- `isD

- `use

```

import React, { useState, useEffect } from 'react';
import { useChat } from '../chat/context/ChatContext';

const Sidebar = ({ isDarkTheme, collapsed, onToggle }) => {
  const {
    friends, friendRequests, groups,
    searchResults, selectedFriend, selectedGroup,
    setSelectedFriend, setSelectedGroup
  } = useChat();

  // State management for sidebar
  const [searchTerm, setSearchTerm] = useState("");
  const [activeTab, setActiveTab] = useState('friends');

  // Search handler
  const handleSearch = async (term) => {
    if (term.trim()) {
      await searchUsers(term);
    }
  };

  return (
    <aside className={`sidebar ${isDarkTheme ? 'dark' : ''}`}>
      { /* Sidebar header with toggle button */ }

      <div className="sidebar-content">
        {activeTab === 'friends' && (
          <>
            { /* Search section */ }

            { /* Friend requests and friends list */ }
          </>
        )}

        {activeTab === 'groups' && (
          // Group management UI
        )}
      </div>
    </aside>
  );

```

```
);  
};  
...
```

****SearchBar.css****

- ***Purpose****:

- ***Key Styles****:

- ***Code Example****:

```
.search-bar {  
  position: relative;  
  width: 100%;  
}  
  
.search-input {  
  width: 100%;  
  padding: 0.75rem 1rem;  
  padding-left: 2.75rem;  
  border: 1px solid #d1d5db;  
  border-radius: 0.75rem;  
  font-size: 0.875rem;  
  background: white;  
  color: #374151;  
}  
  
.sidebar.dark .search-input {  
  background: #374151;  
  border-color: #4b5563;  
  color: white;  
}  
...
```

Stylin

- `.se

```cs

**\*\*LoadingSpinner.css\*\***

- \*Purpose\*\*:

- \*Key Styles\*\*:

- \*Code Example\*\*:

```
.loading-spinner {
 display: flex;
 align-items: center;
 justify-content: center;
}

.spinner {
 border: 3px solid #f3f3f3;
 border-top: 3px solid #6366f1;
 border-radius: 50%;
 animation: spin 1s linear infinite;
}
```

**\*\*GroupMembersModal.jsx\*\***

- \*Purpose\*\*:

- \*Key Features\*\*:

- \*Code Example\*\*:

```
import React, { useState, useEffect } from 'react';
```



```

import { useChat } from '../chat/context/ChatContext';
import { useAuth } from '../auth/context/AuthContext';

const GroupMembersModal = ({ isOpen, onClose, group }) => {
 const { friends, addMemberToGroup, removeMemberFromGroup, getGroupMembers } =
 useChat();
 const { user } = useAuth();

 const [groupMembers, setGroupMembers] = useState([]);
 const [searchTerm, setSearchTerm] = useState("");
 const [isLoading, setIsLoading] = useState(false);
 const [error, setError] = useState("");

 // Load group members on open
 useEffect(() => {
 if (isOpen && group) {
 loadGroupMembers();
 }
 }, [isOpen, group]);

 const loadGroupMembers = async () => {
 if (!group) return;

 setIsLoading(true);
 try {
 const members = await getGroupMembers(group.groupId);
 setGroupMembers(members);
 } catch (error) {
 console.error('Error loading group members:', error);
 setError('Failed to load group members');
 } finally {
 setIsLoading(false);
 }
 };

 // Add member handler
 const handleAddMember = async (friendId) => {
 if (!group) return;

 setIsLoading(true);

```

```

setError("");

try {
 await addMemberToGroup(group.groupId, friendId);
 setSuccess('Member added successfully!');
 await loadGroupMembers(); // Reload members
} catch (error) {
 setError(error.message || 'Failed to add member');
} finally {
 setIsLoading(false);
}
};

return (
 <div className="group-members-modal-overlay" onClick={onClose}>
 {/* Modal content */}

 {/* Current members section */}

 {/* Add members section */}
 </div>
);
};
...

```

## **\*\*Dashboard.jsx\*\***

- **\*Purpose\*\***:

- **\*Key Features\*\***:

- **\*Code Example\*\***:

```

import React, { useState, useEffect } from 'react';
import { useAuth } from '../auth/context/AuthContext';

```

Main

- Inte

```jsx

```

import { useChat } from '../chat/context/ChatContext';
import Sidebar from './Sidebar';
import ChatWindow from './ChatWindow';
import ProfileModal from './ProfileModal';

const Dashboard = () => {
  const { user, logout } = useAuth();
  const { selectedFriend, selectedGroup } = useChat();
  const [showProfileModal, setShowProfileModal] = useState(false);
  const [isDarkTheme, setIsDarkTheme] = useState(false);

  // Theme toggle handler
  const handleToggleTheme = () => {
    const newTheme = !isDarkTheme;
    setIsDarkTheme(newTheme);

    if (newTheme) {
      document.body.classList.add('dark-theme');
    } else {
      document.body.classList.remove('dark-theme');
    }
  };

  return (
    <div className={`dashboard ${isDarkTheme ? 'dark' : ''}`}>
      {/* Header with theme toggle and profile button */}

      {/* Sidebar and ChatWindow components */}

      {/* ProfileModal component */}
    </div>
  );
};

```

****Sidebar.jsx****

- ***Purpose***:

Sidel

- ***Key Features***:

- Imp

- ***Code Example***:

```jsx

```
import React, { useState, useEffect } from 'react';
import { useChat } from '../chat/context/ChatContext';
import SearchBar from './SearchBar';
import ContactItem from './ContactItem';

const Sidebar = ({ isDarkTheme, collapsed, onToggle }) => {
 const {
 friends, groups, searchResults, selectedFriend,
 setSelectedFriend, searchUsers
 } = useChat();

 const [searchTerm, setSearchTerm] = useState("");

 // Search handler
 const handleSearch = async (term) => {
 if (term.trim()) {
 await searchUsers(term);
 }
 };

 return (
 <aside className={`sidebar ${isDarkTheme ? 'dark' : ''}`}>
 {/* Sidebar header with toggle button */}

 {/* Search bar component */}

 {/* Friends list and contact items */}

 {/* Group management components */}
 </aside>
);
};
```

...

## **\*\*MessageList.jsx\*\***

- **\*Purpose\*\***:

Com

- **\*Key Features\*\***:

- Ren

- **\*Code Example\*\***:

```jsx

```
import React from 'react';
import { useAuth } from '../auth/context/AuthContext';
import Message from './Message';

const MessageList = ({ messages, contact, isDarkTheme }) => {
  const { user } = useAuth();

  if (!messages || messages.length === 0) {
    return null;
  }

  return (
    <div className="message-list">
      {messages.map((message) => {
        const isOwnMessage = message.sender === user.uid;
        const senderName = isOwnMessage ? 'You' : contact.displayName;

        return (
          <Message
            key={message.id}
            message={message}
            isOwnMessage={isOwnMessage}
            senderName={senderName}
            isDarkTheme={isDarkTheme}
          />
        );
      })}
    </div>
  );
}
```

```
</div>
);
};
```
```

## **\*\*SearchBar.css\*\***

- **\*Purpose\*\***:

- **\*Key Features\*\***:

- **\*Code Example\*\***:

```
.search-bar {
 position: relative;
 width: 100%;
}

.search-input {
 width: 100%;
 padding: 0.75rem 1rem;
 padding-left: 2.75rem;
 border: 1px solid #d1d5db;
 border-radius: 0.75rem;
 font-size: 0.875rem;
 background: white;
 color: #374151;
 transition: all 0.3s ease;
}

.sidebar.dark .search-input {
 background: #374151;
 border-color: #4b5563;
 color: white;
}
```

Stylin

- Res

```css

...

****LoadingSpinner.css****

- *Purpose**:

Stylin

- *Key Features**:

- Res

- *Code Example**:

```cs

```
.loading-spinner {
 display: flex;
 align-items: center;
 justify-content: center;
}
```

```
.spinner {
 border: 3px solid #f3f3f3;
 border-top: 3px solid #6366f1;
 border-radius: 50%;
 animation: spin 1s linear infinite;
}
```

...

**\*\*robots.txt\*\***

- \*Purpose\*\*:

Robo

- \*Key Features\*\*:

- Allo

- \*Code Example\*\*:

```txt

User-agent: *

Disallow:

...

****manifest.json****

- ***Purpose****:

Web

- ***Key Features****:

- App

- ***Code Example****:

```js

```
{
 "short_name": "React App",
 "name": "Create React App Sample",
 "icons": [
 {
 "src": "favicon.ico",
 "sizes": "64x64 32x32 24x24 16x16",
 "type": "image/x-icon"
 },
 {
 "src": "logo192.png",
 "type": "image/png",
 "sizes": "192x192"
 }
],
 "start_url": ".",
 "display": "standalone",
 "theme_color": "#000000",
 "background_color": "#ffffff"
}
```

...

## **\*\*firebase.json\*\***

- **\*Purpose\*\***:

Fireb



- **\*Key Features\***:

- Hos

- **\*Code Example\***:

```js

{