Project Proposal: MERN Stack Real Estate Application

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1. Project Title

MERN Stack Real Estate Web Application

2. Project Overview

This project aims to develop a **full-stack real estate web application** using the **MERN (MongoDB, Express.js, React, Node.js) stack**. The application will allow users to create, browse, and manage property listings with advanced authentication, search, and filtering features. The platform will provide an intuitive interface similar to industry-leading real estate websites like Realtor, ensuring a seamless user experience.

3. Objectives

- Develop a user-friendly real estate marketplace.
- Implement **secure authentication** with **email/password & Google OAuth**.
- Enable users to **create, edit, and delete property listings**.
- Integrate an **image slider** for property previews.
- Implement **advanced search and filtering** (title-based search, sorting, and property-specific filters).
- Ensure a **responsive UI** with **Tailwind CSS**.

4. Key Features

User Authentication & Profile Management

- Register/Login via **email & password** or **Google OAuth**.
- Secure user sessions using **JSON Web Tokens (JWT)**.
- Profile page for **updating user details** (username, email, password, profile picture).

Property Listings

- Users can **create, edit, and delete** property listings.
- Upload **up to six images** per listing.
- Listings include details like **price, bedrooms, bathrooms, parking availability, and furnishing status**.

Search & Filtering

- **Search by title** to find specific properties.

- **Filter by property type** (sale/rent), price range, number of rooms, and amenities.
- **Sort listings** by price (low to high, high to low) and latest properties.

User Interaction & Contact

- View property details with an **image slider**.
- Contact landlords via a built-in **contact option**.
- Share listings with others via a **copy link button**.

5. Tech Stack

- **Frontend:** React.js, React Router DOM, Tailwind CSS
- **Backend:** Node.js, Express.js
- **Database:** MongoDB
- **State Management:** Redux Toolkit
- **Authentication:** Firebase Authentication, JWT, Google OAuth

8. Conclusion

This **MERN Stack Real Estate Web Application** will serve as a modern, scalable platform for property management. With its intuitive UI, advanced search functionality, and secure authentication, it will provide users with an efficient experience for listing and finding properties.