Team Members:
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Project Title:
JIA Real Estate Website

Overview:
The JIA Real Estate website is a dynamic web application designed to provide a seamless platform for users to browse, search, and inquire about real estate listings. Built using PHP and MySQL, the website includes functionalities such as property search filters, user registration and login, and a contact form for inquiries. This project was undertaken to improve our skills in web development, database integration, and collaboration in a team setting.

Approach:

1. **Initial Planning:**
   Our team started by brainstorming and outlining the core features we wanted to include in the website. Real-world real estate platforms like Zillow and Realtor inspired these features. We divided the project into phases:
   - Database design
   - Backend development
   - Frontend design and integration
   - Testing and deployment
2. **Database Design:**
   - We used MySQL to create the database, focusing on normalization to avoid redundancy.
   - Key tables included users, properties, and inquiries.
   - Relationships were established between users and properties to track listings uploaded by registered users.

Backend Development:

- We used PHP to handle server-side logic. Jordy focused on building secure login and registration functionalities using password hashing with password_hash().
- Akila developed the property management system, which allowed users to upload, edit, and delete listings.
- Iman worked on integrating search filters to enable users to find properties based on price, location, and other criteria.

Frontend Design:

- We utilized HTML, CSS, and Bootstrap for a responsive design. Jordy implemented a user-friendly navigation bar and property cards.
- Akila designed the property detail pages, ensuring they were visually appealing and functional.
- Iman worked on the contact form and connected it to the backend to store inquiries in the database.

Testing and Deployment:

- We conducted unit testing for individual PHP scripts and manual testing for the overall user experience.
- Deployment was done using a local server (XAMPP) for testing and a live server for production.

Challenges Faced:

1. **Database Connection Issues:**
   Early on, we struggled to connect PHP and MySQL due to configuration errors in php.ini. This delayed progress, but we resolved it after researching online and tweaking the server setup.
2. **Search Functionality:**
   Implementing the search filter was more complex than expected. Iman had to rewrite queries multiple times to ensure they were both efficient and functional. Optimizing the database and using prepared statements solved the issue.
3. **Password Security:**
   Initially, we stored passwords in plain text, but after learning about security risks, Jordy implemented password hashing using PHP's password_hash() and password_verify() functions.
4. **Team Coordination:**
   With three different people working on different aspects, we faced occasional merge conflicts when integrating code. Using version control tools like Git helped us resolve these issues.
5. **Responsive Design:**
   Making the website fully responsive was a challenge, especially for the property cards on mobile devices. Akila spent extra time ensuring the site looked professional across all screen sizes.

Lessons Learned:

- **Communication is Key:** Regular team meetings and dividing tasks based on individual strengths kept us on track.
- **Security Best Practices:** This project taught us the importance of securing user data, especially passwords and sensitive information.
- **The Power of Debugging:** We encountered countless bugs during development, but collaboration and thorough testing helped us resolve them.

Conclusion:

The JIA Real Estate website project was a rewarding experience that pushed us to grow as developers and collaborators. It allowed us to practice real-world skills, such as database management, secure coding, and responsive design. While there were challenges, the end result was a functional and aesthetically pleasing website that we are proud of. This project has prepared us to take on more complex web development projects in the future.