Title:
ReStore – A Student-Centric Second-Hand Marketplace and Housing Solution

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Synopsis

ReStore is an innovative, student-centric web platform designed to facilitate the exchange of second-hand goods and access to verified housing options within the KIET student community. The platform aims to promote sustainability, affordability, and digital empowerment by enabling students to buy, sell, and bid on pre-owned items and browse verified listings of PGs and hostels near the campus.

The platform is built using the modern MERN stack—MongoDB, ExpressJS, ReactJS, and NodeJS. It incorporates third-party services such as Cloudinary for image management and Multer for file uploads. Key functionalities include a real-time bidding system, personalized AI-powered recommendations, secure authentication using institutional email verification, and an intuitive user interface designed with mobile responsiveness.

ReStore addresses the common challenges faced by students, such as the lack of a dedicated and secure platform for exchanging goods and the difficulty of finding affordable and trustworthy accommodations. Traditional solutions like OLX, Facebook Marketplace, or informal WhatsApp groups often lack the necessary security, relevance, and trustworthiness that students require.

Core Objectives:

1. To create a dedicated marketplace for student-specific needs, such as books, furniture, electronics, and academic supplies.

2. To offer a reliable accommodation search system (PG Connect) with real-time filtering and geolocation services.

3. To integrate AI technologies for content moderation, smart pricing, and personalized user experience.

The development followed an agile and user-centric approach, including phases such as requirement analysis, system design, modular development, testing, and deployment. Security has been ensured through JWT-based authentication, secure file handling, and restricted access to verified KIET students.

Highlights of the Platform:

- Real-time bidding mechanism for fair pricing

- Verified PG and hostel listings with map integration

- Secure login through institutional email authentication

- AI-driven product recommendations and future moderation plans

- Sustainability focus through reuse and circular economy principles

Limitations and Future Scope:

While the current version of ReStore fulfills its primary objectives, certain advanced features like in-platform payments, chat functionalities, native mobile apps, and automated AI moderation are identified for future development. Furthermore, the platform is currently limited to KIET students, but its modular design allows for scalability to other institutions.

Conclusion:

ReStore is a practical and scalable solution that effectively addresses real-world problems faced by college students. By blending community focus with modern web technologies and sustainability principles, the platform serves as a blueprint for student welfare in academic environments. It stands as a model for promoting responsible consumption, secure transactions, and enhanced peer-to-peer collaboration within campus ecosystems.