Abstract 1:

Computer Accessories Selling System

The Smart Computer Accessories Selling System is an advanced web application designed to facilitate the seamless buying and selling of computer accessories, including graphics cards, RAM, ROM, motherboards, and more. This project employs modern web development technologies, with **React** for the front end and **Node.js** for the back end, to create a comprehensive platform that serves sellers, customers, and administrators.

The primary goal of this system is to provide a user-friendly and efficient marketplace for computer accessories. The system is designed to cater to three main types of users: sellers, customers, and administrators.

Module 1: User Management

1. **User Registration**
    - **Customer Registration**:
        - Register with email, password, and basic information
        - Email verification
    - **Seller Registration**:
        - Register with business details, email, password
        - Email verification and admin approval
2. **User Authentication**
    - Login and logout
    - Password recovery
3. **User Profile Management**
    - View and edit personal information
    - Change password
    - View order history (for customers)
    - View and manage products (for sellers)

Module 2: Product Search

1. **Product Browsing**
    - Detailed catalog of computer accessories
    - search and filter options (by category, price, brand, etc.)
2. **Product Details**
    - Detailed product descriptions
    - Specifications and features
    - User reviews and ratings

Module 3: Shopping Cart and Checkout

1. **Checkout Process**
    - Secure payment (e.g. card details, upi)
    - Billing and shipping information

Module 4: Order Management

1. **Order Tracking**
    - Track order status
    - View order history
    - Cancel or modify orders

Module 5: Seller Management

1. **Product Management**
    - Add, update, and manage product listings
    - Upload product images and descriptions
    - Set prices and stock levels
2. **Inventory Management**
    - Track stock levels
    - Receive low stock alerts
3. **Sales Analytics**
    - View sales data.

Module 6: Admin Panel

1. **User Management**
    - Manage customer and seller accounts
    - Assign roles and permissions
    - Handle account issues
2. **Product Oversight**
    - Monitor and approve product listings

Extended Features

Module 7: Machine Learning Integration

- **Personalized Product Recommendations**: Generate personalized product suggestions based on user behavior and preferences.

- **Budget-Based Recommendations**: Allow customers to input their budget and intended use (gaming, office work, etc.), and generate tailored accessory suggestions that fit their requirements.

Abstract 2:

Houseboat Booking System

The Houseboat Booking System is a web application designed to facilitate the booking and management of houseboat rentals from individual houseboat owners. The system utilizes **React** for the frontend and **Node.js** for the backend, providing a seamless and user-friendly experience. The platform allows houseboat owners to register and list their houseboats, users to search and book houseboats, and administrators to oversee the system, ensuring quality and reliability through review verification and overall system control.

Key Features

1. **User Authentication and Registration**
    - **User Registration and Login**: Users and houseboat owners can register and log in.
    - **Profile Management**: Users and houseboat owners can manage their profiles.
2. **Houseboat Owner Registration**
    - **Owner Registration**: Houseboat owners can register and list their houseboats.
    - **Owner Profile Management**: Owners can manage their profiles and listings.
3. **Houseboat Search**
    - **Search Functionality**: Users can search for houseboats by location, date, capacity, and amenities.
4. **Booking Management**
    - **Availability Check**: Real-time availability check for houseboats.
    - **Booking and Cancellation**: Users can book and cancel houseboat reservations.
    - **Payment Processing**: Secure payment processing for bookings.
    - **Booking History**: Users can view their booking history and status.
5. **Houseboat Details and Reviews**
    - **Detailed Listings**: Houseboat listings with photos, descriptions.
    - **User Reviews and Ratings**: Users can leave reviews and ratings for houseboats.
    - **Review Verification**: Admins verify and approve reviews.
6. **Admin Panel**

- **User Management**: Admins can manage user accounts (approve, edit, delete).
- **Houseboat Management**: Admins can manage houseboat listings (approve, edit, delete).
- **Review Management**: Admins verify and manage reviews.
- **Booking Monitoring**: Admins monitor and manage bookings.

Extended Features

Machine Learning

1. **Personalized Recommendations**
   - **Recommendation** : Suggest houseboats based on user preferences and past bookings.
   - **Behavioral Analysis**: Recommend locations and houseboat types based on user behavior.
2. **Customer Budget and Preferences**
   - **Budget Collection**: Collect user budget and preferences (e.g., luxury, budget, family-friendly).
   - **Personalized Suggestions**: Use ML algorithms to generate personalized houseboat suggestions.
3. **Sentiment Analysis**
   - **Review Analysis**: Analyze user reviews to determine sentiment and highlight top-rated houseboats.
4. **Chatbot Integration**
   - **ML-Based Chatbot**: Implement an ML-based chatbot for instant customer support and inquiries.

Abstract 3:

Tender Management System

The Smart Tender Management System is an advanced web application designed to streamline the tendering process for companies looking to perform work (Contractors), companies applying for tenders (Applicants), and administrators managing the process. This project employs modern web development technologies, utilizing **React** for the front end and **Node.js** for the back end, to create a comprehensive platform that facilitates the submission, evaluation, and awarding of tenders. The system aims to enhance transparency, efficiency, and ease of use in managing tenders.

The primary goal of this system is to provide a user-friendly and efficient platform for managing the entire tendering lifecycle. Key features include user authentication, tender creation and management, tender submission and communication. The system is designed to cater to three main types of users: contractors, applicants, and administrators.

Module 1: User Management

1. **User Registration**
    - **Contractor Registration**: Register with business details, email, and password; email verification and admin approval.
    - **Applicant Registration**: Register with business details, email, and password; email verification and admin approval.
    - **Admin Registration**: Admin account creation by super admin.
2. **User Authentication**
    - Login and logout
3. **User Profile Management**
    - View and edit personal and business information
    - Change password
    - View submitted tenders and results (for contractors and applicants)

Module 2: Tender Management

1. **Tender Listing**
    - Display active tenders
2. **Tender Submission**
    - Applicants can submit tenders
    - Upload necessary documents and details
    - Confirmation of submission
3. **Tender Evaluation**
    - Admins and evaluators can review

Module 3: Communication

1. **Messaging**
    - Secure messaging system between contractors, applicants.

Module 4: Admin Panel

1. **User Management**

- Manage contractor and applicant accounts
- Assign roles and permissions
- Handle account issues

2. **Tender Oversight**
   - Monitor and manage all tenders
   - Ensure compliance and quality control

Module 5: Advanced Functionalities

1. **Machine Learning Integration**
   - **Recommendation System**: Suggest suitable tenders to applicants based on their past submissions and success rates
2. **Chatbot Integration Using ML**
   - **Customer Support Chatbot**: Provide support for contractors, applicants, and administrators
   - **Guidance and Recommendations**: Offer guidance on how to submit tenders, common issues, and best practices

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