EQUALTRADE: INCLUSIVE WEB PLATFORM ROADMAP

1. Research and Planning Phase

1.1 Market Research

- **Target Audience:**
  - **Vendors:** Individuals with intellectual and visual impairments.
  - **Customers:** General public interested in unique artisan products.
- **User Needs Analysis:**
  - Simple, intuitive UI for users with intellectual impairments.
  - Voice commands and audio guidance for visually impaired users.
  - Step-by-step guided selling and transaction support.
- **Competitor Analysis:**
  - Analyze existing e-commerce platforms for accessibility features.
  - Identify gaps in inclusivity and usability.

1.2 Project Scope and Goals

- Develop a web platform accessible for users with intellectual and visual impairments.
- Integrate assistive technologies like voice commands, screen readers, and simplified navigation.
- Ensure seamless vendor onboarding and product showcasing.

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2. Design Phase

2.1 User Experience (UX) Design

- **For Intellectual Impairments:**
  - Simple and intuitive UI.
  - Large, clear buttons with icons.
  - Clean layout with minimal text.
  - Step-by-step guided selling process.
- **For Visual Impairments:**
  - Voice commands and audio guidance.
  - Screen reader compatibility.
  - High-contrast mode and font adjustability.
  - Voice assistance for navigation and transactions.

2.2 User Interface (UI) Design

- Limited color palette for better focus and contrast.
- Auto-suggestions and drop-down lists for easier input.

- Picture-based navigation with recognizable icons and simple labels.
- High-contrast mode toggle for enhanced readability.

2.3 Wireframing and Prototyping

- Create wireframes for key pages:
    - Home Page
    - Vendor Dashboard
    - Product Upload Page
    - Customer Page
    - Payment and Checkout
- Develop interactive prototypes to validate the flow and user interactions.

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3. Development Phase

3.1 Front-End Development

- **Technology Stack:** HTML5, CSS3, JavaScript, React.js
- **Key Features:**
    - Responsive design for accessibility across devices.
    - ARIA (Accessible Rich Internet Applications) attributes for screen readers.
    - Voice command integration for navigation and input.

3.2 Back-End Development

- **Technology Stack:** Node.js, Express.js, MongoDB
- **Key Features:**
    - User authentication and profile management.
    - Product management system (upload, edit, delete).
    - Order processing and transaction management.

3.3 API Integration

- **Voice Recognition and Guidance:**
    - Speech recognition API (e.g., Google Web Speech API).
    - Text-to-speech API for audio guidance and navigation.
- **Payment Gateway Integration:**
    - Support for multiple payment options, including QR code and NFC payment.

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4. Testing Phase

4.1 Accessibility Testing

- **Tools:** Axe, WAVE, NVDA (NonVisual Desktop Access)
- **Focus Areas:**
  - Compatibility with screen readers.
  - Voice navigation accuracy.
  - High-contrast mode and font scalability.

4.2 Usability Testing

- **Participants:**
  - Users with intellectual and visual impairments.
- **Objectives:**
  - Test ease of navigation and product upload.
  - Assess overall user experience and satisfaction.

4.3 Functional Testing

- Validate functionalities such as:
  - Sign-up, login, and authentication.
  - Product upload, edit, and delete.
  - Order processing and payment transactions.

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5. Launch Phase

5.1 Deployment

- **Hosting Platform:** Cloud-based hosting (e.g., AWS, Azure).
- **Domain and SSL Certificate:** Secure domain and HTTPS for data protection.

5.2 Marketing and Outreach

- **Digital Marketing:** Social media campaigns targeting disability communities and support organizations.
- **Partnerships:** Collaborate with NGOs and organizations supporting disabled artisans.

5.3 Training and Support

- Develop user guides and video tutorials.
- Provide ongoing customer support via chatbots and helpdesk.

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6. Maintenance and Updates Phase

6.1 Performance Monitoring

- Continuous monitoring of platform performance and accessibility.
- Regular updates for bug fixes and new feature integration.

6.2 User Feedback and Improvement

- Collect feedback from users to improve usability and accessibility.
- Implement requested features to enhance user experience.
