**PROJECT PROPOSAL**

**22CLC02 – GROUP 8**

***Members:***

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# Introduction:

1. **Project name:** T-2Hand.
2. **Idea:** In today's throw-away culture, old and unused items are often discarded as waste, contributing significantly to environmental degradation. At the same time, the cost of living has steadily increased, making affordability a critical concern for many. By providing a platform for individuals to sell items they no longer need, users can recover a fair portion of their original investment while helping reduce waste. Meanwhile, buyers benefit from purchasing pre-owned goods at a lower cost than buying new, promoting both sustainability and economic savings.
3. **Purpose:** The primary purpose of this web app is to create a marketplace where sellers can conveniently list their second-hand items for sale, and buyers can easily find what they need at a reasonable price. This approach not only extends the lifespan of products but also fosters a more circular economy where resources are reused and valued. By bridging the gap between those who want to declutter and those seeking affordable options, our platform empowers individuals to make more eco-friendly and budget-conscious choices.

# Target users & environments:

1. **Target users:** Users aged 18 and above who have an email and phone number.
2. **Main roles:** Administrators, Sellers and Customers:

* Sellers who list their secondhand items
* Buyers seeking affordable options.
* Administrators manage the platform, ensuring all uploaded content meets quality standards.

1. **Platform environment:** Website.
2. **Framework:** React.js, Express.js

# Key features:

1. **Admin:**

* Account access: Sign up, sign in, sign out.
* Approving and managing sellers: The manager has the right to lock a user's account if any violations of regulations are detected.
* Product approval: Review and approve products posted by sellers before they are publicly displayed. Remove any products that are inappropriate or violate regulations.
* Managing reported products: Monitor products reported by users for quality issues or inappropriate content and take action when necessary.
* Support request management: The manager can track and handle support requests from buyers and sellers, ensuring that complaints and inquiries are addressed promptly.
* Complaint management: Handle complaints from buyers regarding products, services, or payments and liaise with sellers to resolve issues.
* View total number of current users:
  + The admin can check the total number of user accounts registered on the system, and view the total number based on different roles (buyers and sellers).
  + Track the number of new posts today and the total number of previous posts.
* Create a transaction statistics table:
  + The admin can access a detailed table of all transactions conducted on the system. This table will include key information such as:
    - Buyer: Name or ID of the user who made the purchase.
    - Seller: Name or ID of the seller providing the product.
    - Transaction date and time: The time when the transaction took place.
    - Product: The name or description of the product that was bought or sold.
    - Cost: The code of the sold item.

Additionally, transactions can be filtered and sorted based on criteria such as date and time, buyer, or seller, making it easier to retrieve information.

1. **Seller:**

* Account access: Sign up, sign in, sign out.
* Choose role: Choose sellers role after signing in.
* Seller’s page: Displays seller’s name, profile photo, number of items sold, average rating (out of 5 stars), and the total number of ratings, and a list of items currently or previously sold by the seller.
* Chat Box: Integrated direct messaging between sellers and customers to discuss products.
* Upload Items: Sellers can upload product images and provide a detailed description, including how long the item has been used, what features are good or bad, with a clear and trustworthy explanation.
* Manage Listings: View the list of posted items and check their status (sold or unsold).
* Review History: Review comments and ratings left by buyers to improve their sales strategy.
* Real-time notification: Receive notifications when products are bought, messages from customers are received.
* Contact with admins: Get help and instructions from them.

1. **Customer:**

* Account access: Sign up, sign in, sign out.
* Choose role: Choose customers role after signing in.
* View profile: Displays customer information, purchase history.
* Search & Filter Options: Search for products based on name, category, price, location, or product condition (new/used).
* Browse Items: Customers can browse posted items with product names and images before entering the product detail page for more information.
* Shopping Cart: Add items to the shopping cart for future purchases. Customers can view their selected items and the total cost.
* Place Order: Press the "Buy" button to proceed with payment for the items in the shopping cart.
* Leave Feedback & Rate Sellers: Customers can leave comments and provide a rating (out of 5 stars) for the seller based on their buying experience
* Report items: Report truthless, bad items to the admin.
* Real-time notification: Receive notifications when messages are received, or the status of an order is updated.
* Contact with admins: Get help and instructions from them.

1. **Competitors:**

#### 1. Major E-commerce Platforms (e.g., Shopee, Lazada, Tiki):

1. **Strengths:**

* Large scale and high reliability.
* Secure payment systems and nationwide delivery.
* Diverse product offerings, including both new and used goods.

1. **Weaknesses:**

* Primarily focused on new products; second-hand goods are less popular.
* Individual sellers face high competition from businesses.
* High commission and shipping fees.

#### 2. Specialized Second-hand Marketplaces (e.g., Chợ Tốt, Facebook Marketplace, 5miles):

1. **Strengths:**

* Focused on second-hand goods, catering to a suitable customer base.
* Direct transactions without intermediaries (except for platforms like Chợ Tốt).

1. **Weaknesses:**

* Lack of strict quality control for listed products.
* High risk of scams.
* Inconsistent user experience.

#### 3. International Second-hand Apps (e.g., eBay, Carousell):

1. **Strengths:**

* Diverse features and support for various transaction types.
* Familiar platforms for international users.

1. **Weaknesses:**

* Language barriers and challenges with international shipping policies.
* Not optimized for the Vietnamese market.

1. **Differentiators:**
2. **Environmental Focus:**

* T-2Hand aims to build a circular economy, reducing waste and maximizing resource reuse.
* Integrates educational content or campaigns about environmental protection to engage the community.

1. **Product Approval System:**

* Admin reviews and approves products before they are publicly displayed to ensure quality and transparency.

1. **Specialized Features for Sellers and Buyers:**

* **For Sellers:**
* Provides an interface to manage sales history and customer feedback.
* Real-time notifications enhance user experience.
* **For Buyers:**
* Smart search and filtering system based on location and product condition.
* Integrated shopping cart and seller rating system.

1. **User Protection:**

* Reporting system for untrustworthy products or transactions.
* Admin acts as a mediator to resolve complaints, minimizing risks for both parties.

1. **Local Market Focus:**

* T-2Hand is optimized for the needs and behaviors of Vietnamese users.
* User-friendly interface with Vietnamese language support tailored to local shopping habits.