Project Idea: Price Tracker
Project Name: The Price is Right… Enterprice… Check it Out… The Bazaar…

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Vision Statement

Description and Scope of the Project

This project is a website that gathers product pricing data from various sources, tracking price changes over time. The goal is to keep consumers informed and hold companies accountable for monopolies or deceptive pricing. If APIs are unavailable, AI-driven web scraping will collect the data and store it in a database.

Users

- **Consumers**: Shoppers comparing prices to make informed purchases.
- **Retailers**: Businesses tracking competition and pricing trends.
- **Distributors**: Bulk buyers optimizing their pricing strategies.
- **Manufacturers**: Producers evaluating market conditions for better pricing.

Purpose of the Project

- Promote fair competition by exposing price manipulation.
- Help consumers compare prices and avoid overpriced products.
- Implement a product-quality rating system for informed choices.
- Detect and highlight fake deals where prices are artificially inflated before sales.
- Give new businesses insights into market trends and price movements.

What Differentiates Our Product

Most price trackers focus on electronics or one-time purchases. Our platform prioritizes daily essentials like groceries, where companies often increase prices due to consumer dependency. Additionally, we estimate production costs vs. selling prices to reveal corporate profit margins, showing which companies are overcharging consumers.

Why Our Product is Valuable

Large corporations exploit pricing strategies to maximize profits, leaving consumers and small businesses at a disadvantage. By making pricing data public, we level the playing field and ensure transparency, competition, and accountability in the market.

Success Criteria

- Gather and aggregate large amounts of pricing data efficiently.
- Display data in a clear, user-friendly format with filtering and sorting.
- Provide tools for searching, comparing, and analyzing price trends.

Big user stories

- View Each Store and its Inventory/Prices
  (In these user stories, users can see available products and their prices at different stores)
  - Use APIs and scrub websites to gather data on product prices
  - Allow users to submit data on products and prices.
  - Verify user inputs or require them to add a link/proof.
  - Track prices of Consumer/Customer Goods.
  - Track prices of Manufactured Goods/Products being sold.

- Compare prices/availability from different stores on the same Items
  (In these user stories, users can compare prices across stores to find the best deals)
  - Compare product prices from different stores.
  - Compare profit margins on each item.
  - Compare prices of the same product in different stores.
  - Compare profits gained from products Year over Year.
  - Sort by lowest to highest, percentage of change, date, name, etc.

- Create a grocery list and select a store with the cheapest overall total
  (In these user stories, users can track and analyze price trends to make cost-effective shopping decisions)
  - Visualize and display data in easy-to-digest forms such as graphs.
  - Different types of graphs
  - Graph prices and changes over a Monthly, Yearly, 5-Year, etc., period.
  - Add products to a watchlist to track
  - Highlight the highest gains or price drops
  - Spotlight on the front page

Iteration 1 detailed user stories

a. Compare product prices from different stores.
   i. Users can search for a product by name or category.
   ii. Display a list of stores selling the product with their prices.
   iii. Users can see price differences between stores in a table format.
   iv. Allow filtering by store name, location, and stock availability.
   v. Data is updated periodically to ensure accuracy.

b. Compare profit margins on each item.
   i. System estimates production cost based on industry averages.
   ii. Display profit margin percentage for each product.
   iii. Highlight items with high profit margins using a visual indicator.
   iv. Users can filter/search products by profit margin range.

c. Compare prices of the same product in different stores.
    i. Users can select a product and view its price history per store.
    ii. Show a graph of price changes over the last month, 6 months, or year.
    iii. Allow filtering by store, location, and time period.
    iv. Notify users when a product's price drops at a specific store.

d. Compare profits gained from products Year over Year.
    i. Users can select a product and view its yearly profit changes.
    ii. Display percentage increase or decrease in profit margins over time.
    iii. Provide a graph visualization showing trends across multiple years.
    iv. Allow users to compare multiple years side by side.

e. Sort by lowest to highest, percentage of change, date, name, etc.
    i. Users can sort products by:
        1. Price (Low → High, High → Low)
        2. Percentage change in price
        3. Date of last price update
        4. Product name (A-Z, Z-A)
    ii. Sorting applies to search results and comparison lists.
    iii. The sorting should be fast and efficient even with large datasets.