PROJECT IDEA: Rehnuma

"رَہنُما" - Our platform will revolutionize the grocery shopping experience by leveraging technology to help consumers save money through intelligent shopping routes across multiple supermarkets. The application will provide an interface where users can input their grocery lists and receive optimized shopping plans that consider both product prices across different stores and transportation costs by finding the best combination of supermarkets nearby to purchase these items at the lowest total cost. The app will act as a guide for users by generating an optimized itinerary, helping them shop efficiently while minimizing costs. Hence, the name "Rehnuma" signifies its role in providing smart and strategic shopping directions.

Objectives:
- Provide cost-efficient grocery shopping by analyzing supermarket prices.
- Optimize purchases while factoring in fuel costs.
- Offer an intuitive and user-friendly interface for grocery input.
- Periodically update supermarket inventories and prices.

Software Interfaces:
- User Interface (UI): Web-based front-end for users to enter grocery items and view optimized shopping itinerary.
- Supermarket Database: Stores inventory data with periodic updates.
- Routing and Optimization Algorithm: Determines the best purchase locations while factoring in fuel costs.

Hardware Interfaces:
- User Devices: Smartphones or computers to access the web app.

Features Covered:

✓ User registration and profile management
✓ Grocery list entry.
✓ Location-based supermarket selection
✓ Price comparison across supermarkets
✓ Fuel cost consideration for optimization
✓ Dynamic itinerary generation
✓ Supermarket inventory updates

Server Details

- Backend API server for handling requests (hosted on Azure).
- Database server for inventory management (NoSQL).

Tech Stack

- **Frontend**: React.js for UI
- **Backend**: Node.js
- **Database**: MongoDB for inventory management and user information.
- **Location Services**: Google Maps API
- **Optimization Algorithm**: Python

UX WIREFRAMES DESIGN:

1)Sign Up Page:

2) User Input Page

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Tired of prices never the same?
Don't worry, we've got the game!
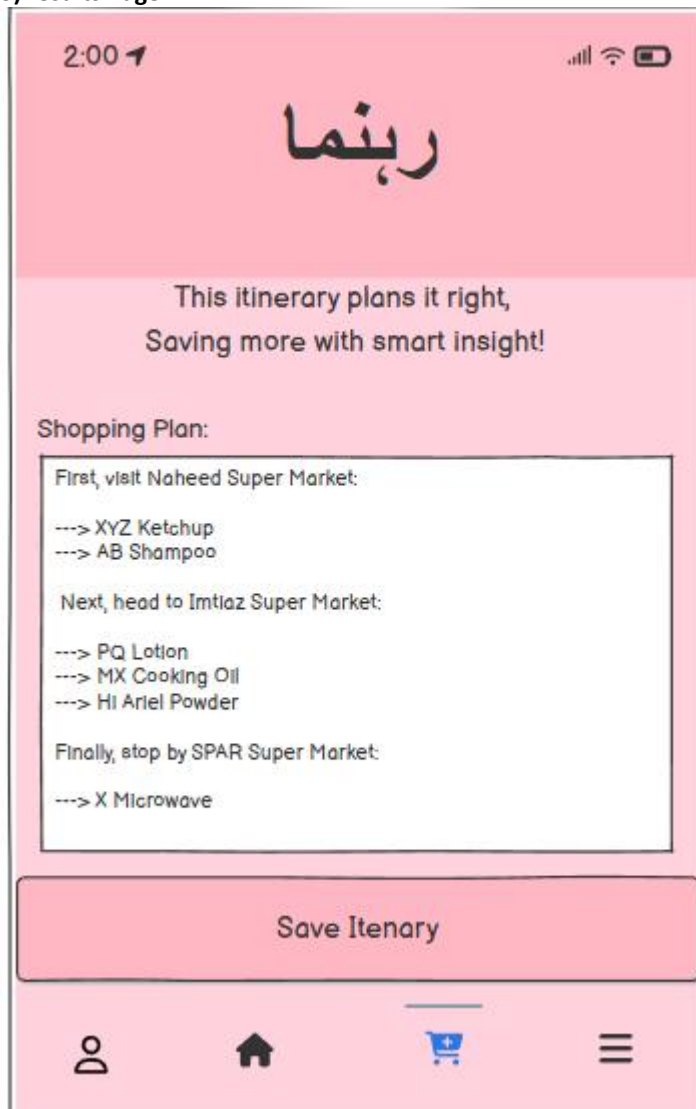
Enter The Grocery Items You Want Below:

Guide Me

3)Results Page:

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This itinerary plans it right,
Saving more with smart insight!

Shopping Plan:

First, visit Naheed Super Market:

---> XYZ Ketchup
---> AB Shampoo

Next, head to Imtiaz Super Market:

---> PQ Lotion
---> MX Cooking Oil
---> HI Ariel Powder

Finally, stop by SPAR Super Market:

---> X Microwave

Save Itenary

4) History and Profile Page:

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Past trips tracked, more savings packed!

Itenary Number	Amount	◇
1	PKR 2500.00	
2	PKR 12500.00	View
3	PKR 1500.00	