

AUTOMATION OF PERSONAL FINANCES

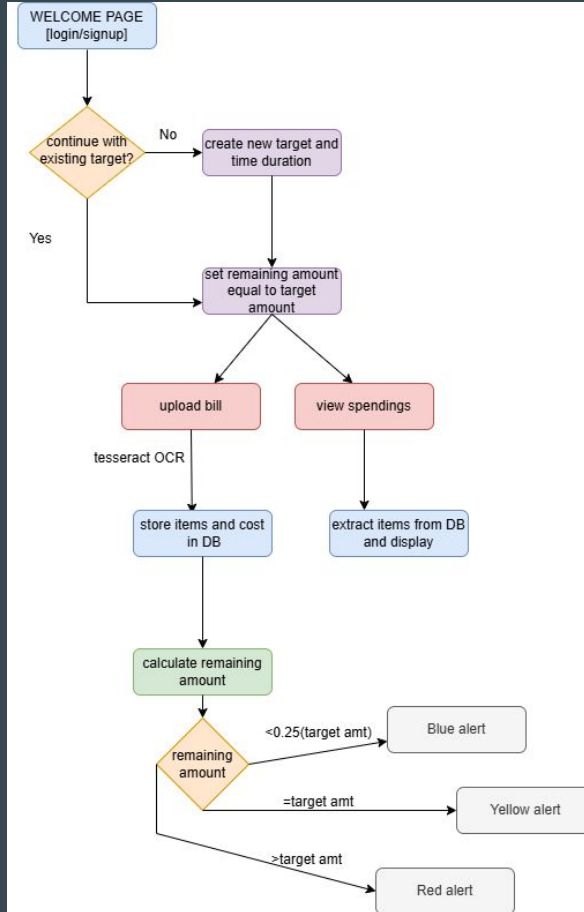
TRACK - AUTOMATION

Managing personal finances manually is time-consuming, error-prone, and lacks real-time insights.

Core Challenges:

- Users often struggle to track their spending habits and budget allocations.
- Bills and receipts are stored in physical or scattered digital formats, making analysis difficult.
- No clear visibility into where money is being spent, overspending patterns, or category-wise insights.
- Manually updating expenses in spreadsheets or apps can be inconvenient and inconsistent.

ARCHITECTURE DIAGRAM



SOLUTION OVERVIEW

1. Our project creates a hassle free environment where users can track their finance expenditure by just uploading the purchase bill rather than manually entering all the details
2. It allows users to set a target amount and the time during which they wish to spend the amount.
3. Our solution provides graphical visualization of the data.

TECH STACK

Frontend - React.js, CSS

Backend - Node.js, MongoDB

Text Extraction - Tesseract OCR

Working on :

GenAI -> To give feedback on user inputs

Implementation details

1. Set Target Amount and time duration

User sets spending or savings target and the time during which he/she wishes to spend it.

2. OCR Bill Scanning

Uploads bill images, Tesseract.js extracts text and saves it to MongoDB.

3. Custom Regex Parser

Extracts item names, prices, and dates from receipts using regex-based parsing.

4. Expense Tracking

Categorized transactions are stored in MongoDB for easy access and management.

5. Real-Time Budget Calculation

Tracks remaining budget and updates as bills are added.

6. Budget Management

Auto-updating budget with real-time calculations and alerts.

7. Spending Alerts

- Alerts triggered at 25%, 100%, and exceeded target amounts:
- Blue Alert: Remaining amount is 25% of target.
- Orange Alert: Remaining amount is 0.
- Red Alert: Remaining amount is less than target.
- Customizable alert thresholds.

8. Dashboard Analytics

- Spending History Visualization: Displays data using React and Recharts for easy tracking.
- Breakdown of spending by categories and trends.

9. Analysis of Items Purchased

Detailed analysis of items and expenses to help identify spending patterns.



Welcome to EcoFinance Tracker

Please login to continue

 Login / Register



My Finance Dashboard

Profile

Name: Dilsha
Email: dilshasingh@gmail.com

 Use Existing Target

 Create New Target

 Back

My Bills

Item	Price	Date of Purchase
NailPolish	\$100.00	18/5/2025
NailPolish	\$100.00	18/5/2025
Tomato	\$40.00	18/4/2025
Milk	\$60.00	17/5/2025
Chocolate	\$100.00	17/5/2025
NailPolish	\$100.00	18/5/2025
Milk	\$60.00	17/5/2025
Chocolate	\$100.00	17/5/2025
Tomato	\$40.00	18/4/2025
NailPolish	\$100.00	18/5/2025
Tomato	\$40.00	18/4/2025
Milk	\$60.00	17/5/2025
Chocolate	\$100.00	17/5/2025



Profile



Name: Dilsha
Email: dilshasingh@gmail.com

 Use Existing Target

 Create New Target

Create New Target

Budget Tracker

Target Amount: From: To:   Set Budget

Total Spent: \$0.00

Remaining: \$200.00

 Upload Bill

 View My Bills

 View Spending Graph

 Back



Upload New Bill

Shop Name bill-formated-date1.jpg



Extracted Items

- NailPolish - \$100.00

Alert: You've exceeded your budget target!



My Finance Dashboard