

PROJECT 1: FINTRAK – Personal Expense Tracker

Description

A CLI-based system to manage personal income and expenses. Users can record earnings, categorize expenses, and get summaries to understand their financial health. Perfect for learning data structures, loops, and simple analytics.

Scenario

Users often lose track of where their money goes. This app helps record daily transactions, analyze spending patterns, and issue budget alerts when overspending occurs.

Menu

FINTRAK - Personal Expense Tracker

1. Register User
2. Add Income
3. Add Expense
4. View Current Balance
5. Monthly Summary Report
6. View Top Spending Categories
7. Set Budget Limit
8. Check Budget Alerts
9. View All Transactions
10. Exit

Enter your choice:

Functions Needed

```
def register_user(user_id, name) def add_income(user_id, amount, source, date) def
add_expense(user_id, amount, category, date, notes) def get_balance(user_id) def
generate_monthly_summary(user_id, month) def get_top_spending_categories(user_id,
count) def set_budget_limit(user_id, category, limit) def check_budget_alerts(user_id)
def view_transactions(user_id)
```

Sample Output

```
=== MONTHLY SUMMARY === User: Arav (U101) Month: October 2025 Total Income: ₹ 60,000
Total Expenses: ₹ 45,200 Savings: ₹ 14,800 Top Categories: Food (₹ 18,000), Rent
(₹ 12,000) Budget Alert : Food exceeded limit by ₹ 3,000
```

Edge Cases

Expense entered before income (negative balance) Wrong date/month format Duplicate transactions Empty transactions for summary