#include <iostream>

#include <vector>

#include <string>

using namespace std;

class Transaction {

public:

string type, description;

double amount;

Transaction(string t, string d, double a) : type(t), description(d), amount(a) {}

};

class FinanceManager {

vector<Transaction> transactions;

double totalIncome = 0, totalExpense = 0, budget = 0;

public:

void setBudget(double b) {

budget = b;

cout << "Budget set to: ₹" << b << endl;

}

void addTransaction(const string& type, const string& desc, double amt) {

transactions.emplace\_back(type, desc, amt);

if (type == "Income") totalIncome += amt;

else totalExpense += amt;

}

void showReport() const {

cout << "\n--- Financial Report ---\n";

cout << "Total Income: ₹" << totalIncome << endl;

cout << "Total Expenses: ₹" << totalExpense << endl;

cout << "Remaining Budget: ₹" << (budget - totalExpense) << endl;

if (totalExpense > budget)

cout << "Warning: You have exceeded your budget!\n";

}

void showTransactions() const {

cout << "\n--- Transaction List ---\n";

for (const auto& t : transactions) {

cout << t.type << " - " << t.description << ": ₹" << t.amount << endl;

}

}

};

int main() {

FinanceManager manager;

int choice;

double amount;

string desc;

while (true) {

cout << "\n--- Personal Finance Manager ---\n";

cout << "1. Set Budget\n2. Add Income\n3. Add Expense\n";

cout << "4. Show Transactions\n5. Show Report\n0. Exit\n";

cout << "Choose an option: ";

cin >> choice;

if (choice == 0) {

cout << "Exiting the program...\n";

break;

}

switch (choice) {

case 1:

cout << "Enter budget amount: ₹";

cin >> amount;

manager.setBudget(amount);

break;

case 2:

case 3:

cout << (choice == 2 ? "Enter income description: " : "Enter expense description: ");

cin.ignore();

getline(cin, desc);

cout << "Enter amount: ₹";

cin >> amount;

manager.addTransaction(choice == 2 ? "Income" : "Expense", desc, amount);

break;

case 4:

manager.showTransactions();

break;

case 5:

manager.showReport();

break;

default:

cout << "Invalid choice. Please try again.\n";

break;

}

}

return 0;

}