Week 3:

import java.util.ArrayList;

import java.util.Scanner;

class Expense {

String description;

double amount;

String category;

public Expense(String description, double amount, String category) {

this.description = description;

this.amount = amount;

this.category = category;

}

}

public class ExpenseTracker {

private ArrayList<Expense> expenses = new ArrayList<>();

public void addExpense(String description, double amount, String category) {

expenses.add(new Expense(description, amount, category));

}

public void viewExpenses() {

for (Expense expense : expenses) {

System.out.println("Description: " + expense.description);

System.out.println("Amount: $" + expense.amount);

System.out.println("Category: " + expense.category);

System.out.println();

}

}

public double calculateTotalExpenses(String category) {

double total = 0;

for (Expense expense : expenses) {

if (expense.category.equalsIgnoreCase(category)) {

total += expense.amount;

}

}

return total;

}

public static void main(String[] args) {

ExpenseTracker tracker = new ExpenseTracker();

Scanner scanner = new Scanner(System.in);

while (true) {

System.out.println("Expense Tracker Menu:");

System.out.println("1. Add Expense");

System.out.println("2. View Expenses");

System.out.println("3. View Expense Summaries");

System.out.println("4. Exit");

System.out.print("Enter your choice: ");

int choice = scanner.nextInt();

switch (choice) {

case 1:

System.out.print("Enter description: ");

String description = scanner.next();

System.out.print("Enter amount: $");

double amount = scanner.nextDouble();

System.out.print("Enter category: ");

String category = scanner.next();

tracker.addExpense(description, amount, category);

break;

case 2:

System.out.println("Expenses:");

tracker.viewExpenses();

break;

case 3:

System.out.print("Enter category to calculate total expenses: ");

String categoryToCalculate = scanner.next();

double total = tracker.calculateTotalExpenses(categoryToCalculate);

System.out.println("Total expenses for category '" + categoryToCalculate + "': $" + total);

break;

case 4:

System.out.println("Goodbye!");

System.exit(0);

default:

System.out.println("Invalid choice. Please try again.");

}

}

}

}