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Java Programming

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**Project 3-1 Calculate Grocery Bill**

**Source Code:**

// @author Maddison Kiefer

import java.util.Scanner;

public class CalculateGroceryBill {

public static void main(String[] args) {

Scanner scnr = new Scanner(System.in);

// Creating the variables

double couponAmount;

int numWeeks;

double totalBill = 0;

double monthlyTotalWithoutCoupon;

double weeklyAverageWithoutCoupon;

double monthlyTotalWithCoupon;

double weeklyAverageWithCoupon;

// Prompting the user for a coupon amount

System.out.println("Enter a coupon amount as a decimal (ex. .10): ");

couponAmount = scnr.nextDouble();

// Setting couponAmount equal to .10 if less than or equal to 0 or greater than 1

if(couponAmount > 1 || couponAmount <= 0){

couponAmount = .10;

}

// Prompting the user for the number of weeks

System.out.println("Enter number of weeks, between 2 and 4: ");

numWeeks = scnr.nextInt();

// If less than 2 or greater than 4, the number of weeks is not valid

if(numWeeks < 2 || numWeeks > 4) {

System.out.println("Invalid number of weeks.");

return;

}

// Prompting the user for the grocery bill for the first week and adding that to the totalBill

System.out.println("Enter grocery bill for the first week: ");

double weekOneBill = scnr.nextDouble();

totalBill += weekOneBill;

// Prompting the user for the grocery bill for the second week and adding that to the totalBill

System.out.println("Enter grocery bill for the second week: ");

double weekTwoBill = scnr.nextDouble();

totalBill += weekTwoBill;

// If the user entered a week number greater than 2, prompt them for the bill for the third week and add that to billTotal

if(numWeeks > 2) {

System.out.println("Enter grocery bill for the third week: ");

double weekThreeBill = scnr.nextDouble();

totalBill += weekThreeBill;

}

// If the user entered a week number greater than 3, prompt them for the bill for the fourth week and add that to billTotal

if(numWeeks > 3) {

System.out.println("Enter grocery bill for the fourth week: ");

double weekFourBill = scnr.nextDouble();

totalBill += weekFourBill;

}

// Calculating the monthly total and weekly average with no coupon

monthlyTotalWithoutCoupon = totalBill;

weeklyAverageWithoutCoupon = totalBill / numWeeks;

// Calculating the monthly total and weekly average with a coupon

monthlyTotalWithCoupon = totalBill \* (1 - couponAmount);

weeklyAverageWithCoupon = monthlyTotalWithCoupon / numWeeks;

// Outputting the totals to the console

System.out.println("");

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

System.out.printf("Monthly total without a coupon is: $" + "%.2f", monthlyTotalWithoutCoupon);

System.out.printf("%nWeekly average without a coupon is: $" + "%.2f", weeklyAverageWithoutCoupon);

System.out.printf("%nMonthly total with a coupon is: $" + "%.2f", monthlyTotalWithCoupon);

System.out.printf("%nWeekly average with a coupon is: $" + "%.2f", weeklyAverageWithCoupon);

System.out.println("");

}

}

**Executing the Application:**









