**Assisted Java Program #4:**

**package sorting;**

**import java.util.ArrayList;**

**import java.util.Scanner;**

**public class Fixbug {**

**public static void main(String[] args) {**

**/\*System.out.println("Hello World!");\*/**

**System.out.println("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");**

**System.out.println("\tWelcome to TheDesk \n");**

**System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");**

**optionsSelection();**

**}**

**private static void optionsSelection() {**

**String[] arr = {"1. I wish to review my expenditure",**

**"2. I wish to add my expenditure",**

**"3. I wish to delete my expenditure",**

**"4. I wish to sort the expenditures",**

**"5. I wish to search for a particular expenditure",**

**"6. Close the application"**

**};**

**int[] arr1 = {1,2,3,4,5,6};**

**int slen = arr1.length;**

**for(int i=0; i<slen;i++){**

**System.out.println(arr[i]);**

**// display the all the Strings mentioned in the String array**

**}**

**ArrayList<Integer> arrlist = new ArrayList<Integer>();**

**ArrayList<Integer> expenses = new ArrayList<Integer>();**

**expenses.add(1000);**

**expenses.add(2300);**

**expenses.add(45000);**

**expenses.add(32000);**

**expenses.add(110);**

**expenses.addAll(arrlist);**

**System.out.println("\nEnter your choice:\t");**

**Scanner sc = new Scanner(System.in);**

**int options = sc.nextInt();**

**for(int j=1;j<=slen;j++){**

**if(options==j){**

**switch (options){**

**case 1:**

**System.out.println("Your saved expenses are listed below: \n");**

**System.out.println(expenses+"\n");**

**optionsSelection();**

**break;**

**case 2:**

**System.out.println("Enter the value to add your Expense: \n");**

**int value = sc.nextInt();**

**expenses.add(value);**

**System.out.println("Your value is updated\n");**

**expenses.addAll(arrlist);**

**System.out.println(expenses+"\n");**

**optionsSelection();**

**break;**

**case 3:**

**System.out.println("You are about the delete all your expenses! \nConfirm again by selecting the same option...\n");**

**int con\_choice = sc.nextInt();**

**if(con\_choice==options){**

**expenses.clear();**

**System.out.println(expenses+"\n");**

**System.out.println("All your expenses are erased!\n");**

**} else {**

**System.out.println("Oops... try again!");**

**}**

**optionsSelection();**

**break;**

**case 4:**

**sortExpenses(expenses);**

**optionsSelection();**

**break;**

**case 5:**

**searchExpenses(expenses);**

**optionsSelection();**

**break;**

**case 6:**

**closeApp();**

**break;**

**default:**

**System.out.println("You have made an invalid choice!");**

**break;**

**}**

**}**

**}**

**}**

**private static void closeApp() {**

**System.out.println("Closing your application... \nThank you!");**

**}**

**private static void searchExpenses(ArrayList<Integer> arrayList) {**

**int leng = arrayList.size();**

**System.out.println("Enter the expense you need to search:\t");**

**//Complete the method**

**}**

**private static void sortExpenses(ArrayList<Integer> arrayList) {**

**int arrlength = arrayList.size();**

**for (int i = 0; i < arrlength - 1; ++i) {**

**for (int j = 0; j < arrlength-i-1; ++j) {**

**if (arrayList.get(j) > arrayList.get(j + 1)) {**

**int temp = arrayList.get(j);**

**arrayList.set(j, arrayList.get(j + 1));**

**arrayList.set(j + 1, temp);**

**}**

**}**

**}**

**int i = 0;**

**if (i <= arrlength) {**

**System.out.println("the sorted elements are");**

**System.out.println(arrayList+"\n");**

**}**

**}**

**}**