You have been assigned a few tasks during the sprint planning. Solving the bugs raised by the testing team is one among them. You are given the boilerplate code and are asked to complete it by fixing the bugs.

Program:

**import** java.util.ArrayList;

**import** java.util.Scanner;

**public** **class** FixbugLesson5 {

**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("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

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);

*optionsSelection*(expenses,arrlist);

}

**private** **static** **void** optionsSelection(ArrayList<Integer>

expenses,ArrayList<Integer> arrlist) {

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;

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

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

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

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

}

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*(expenses,arrlist);

**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*(expenses,arrlist);

**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*(expenses,arrlist);

**break**;

**case** 4:

*sortExpenses*(expenses);

*optionsSelection*(expenses,arrlist);

**break**;

**case** 5:

*searchExpenses*(expenses);

*optionsSelection*(expenses,arrlist);

**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");

**int** exp=**new** Scanner(System.***in***).nextInt();

**boolean** flag=**false**;

**for**(**int** val:arrayList) {

**if**(exp==val)

flag=**true**;

}

**if**(flag)

System.***out***.println("The Expense You Searched is Present");

**else**

System.***out***.println("The Expense is Not Present");

}

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

**int** arrlength = arrayList.size(),i=0,temp;

**int** []number=**new** **int**[arrlength];

**for**(**int** val:arrayList) {

number[i]=val;

i++;

}

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

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

**if**(number[i]>number[j]) {

temp=number[i];

number[i]=number[j];

number[j]=temp;

}

}

}

arrayList.removeAll(arrayList);

**for**(**int** val:number) {

arrayList.add(val);

}

System.***out***.println("The sorted Expenses are ");

System.***out***.println(arrayList);

// or we can simply use "Collections.sort()" method

}

}