**Source Code**

package lesson5;

import java.util.ArrayList;

import java.util.Scanner;

public class BugFix {

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();

Scanner sn=new Scanner(System.in);

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

int exp=sn.nextInt();

for(int i=0;i<leng;i++) {

if(arrayList.get(i)==exp) {

System.out.println(exp+" is found in expenses");

return;

}

}

System.out.println(exp+" is not found in expenses");

}

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

int arrlength = arrayList.size();

int min=0;

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

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

if(arrayList.get(j)<arrayList.get(i)) {

min=j;

}

}

int t=arrayList.get(min);

arrayList.set(min,arrayList.get(i));

arrayList.set(i,t);

}

System.out.println("Expenses after sort : "+arrayList);

}

}