import java.util.ArrayList;

import java.util.InputMismatchException;

import java.util.Scanner;

public class Main {

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

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

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

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

arrlist.add(1000);

arrlist.add(2300);

arrlist.add(45000);

arrlist.add(32000);

arrlist.add(110);

expenses.addAll(arrlist);

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 slen = arr.length;

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

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

}

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

int options = 0;

try {

options = sc.nextInt();

} catch (InputMismatchException e) {

System.out.println("Invalid input");

}

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 = 0;

try {

value = sc.nextInt();

} catch (InputMismatchException e) {

System.out.println("Invalid input");

}

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

expenses.add(value);

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 confirmChoice = 0;

try {

confirmChoice = sc.nextInt();

} catch (InputMismatchException e) {

System.out.println("Invalid input");

}

if(confirmChoice == 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;

}

sc.close();

}

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 expense = 0;

try {

expense = sc.nextInt();

} catch (InputMismatchException e) {

System.out.println("Invalid input");

}

int index = -1;

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

if(index == -1 && arrayList.get(i) == expense) {

index = i;

}

}

if(index != -1) {

System.out.println("\n"+expense+" is found in your expenditure\n");

}

else {

System.out.println("\n"+expense+" is not found in your expenditure\n");

}

}

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

int arrlength = arrayList.size();

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

int key = arrayList.get(j);

int i = j-1;

while(i>=0 && arrayList.get(i) > key) {

arrayList.set(i+1, arrayList.get(i));

i--;

}

arrayList.set(i+1, key);

}

System.out.println("\nThe expenses have been sorted\n");

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

}

}