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package Practice_Project;

import java.util.ArrayList;
import java.util.Arrays;
import java.util.Collections;
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>();
    }
}

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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");

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        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!");
}

```

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private static void searchExpenses(ArrayList<Integer> arrayList) {
    int leng = arrayList.size();
    System.out.println("Enter the expense you need to search:\t");
    //
    Scanner sc = new Scanner(System.in);
    int input = sc.nextInt();
    //Linear Search
    for(int i=0;i<leng;i++) {
        if(arrayList.get(i)==input) {
            System.out.println("Found the expense " + input + " at " + i + " position");
        }
    }
}

private static void sortExpenses(ArrayList<Integer> arrayList) {
    int arlength = arrayList.size();
    //Complete the method. The expenses should be sorted in ascending order.

    Collections.sort(arrayList);
    System.out.println("Sorted expenses: ");
    for(Integer i: arrayList) {
        System.out.print(i + " ");
    }
    System.out.println("\n");
}
}

```

Output:

Hello World!

Welcome to TheDesk

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

Enter your choice:

1

Your saved expenses are listed below:

[1000, 2300, 45000, 32000, 110]

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

Enter your choice: