

Fix Bugs of the application Source Code:

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package fixBugsOfApp;

import java.util.ArrayList;
import java.util.Collections;
import java.util.Scanner;
public class FixBugs {

    public static void main(String[] args) {
        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"
        };

        ArrayList<Integer> expenses = new ArrayList<>();
        expenses.add(1000);
        expenses.add(2300);
        expenses.add(45000);
        expenses.add(32000);
        expenses.add(110);

        int slen = arr.length;
        for (int i = 0; i < slen; i++) {
            System.out.println(arr[i]);
        }

        System.out.print("\nEnter your choice: ");
        Scanner sc = new Scanner(System.in);
        int options = sc.nextInt();

        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: ");
                int value = sc.nextInt();
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        expenses.add(value);
        System.out.println("Your value is updated\n");
        System.out.println(expenses + "\n");
        optionsSelection();
        break;
    case 3:
        System.out.println("You are about to delete all your
expenses!\nConfirm by selecting the same option again...");
        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.print("Enter the expense you need to search: ");
    Scanner sc = new Scanner(System.in);
    int searchValue = sc.nextInt();
    boolean found = false;

    for (int i = 0; i < leng; i++) {
        if (arrayList.get(i) == searchValue) {
            System.out.println("Expense found at position " + i);
            found = true;
        }
    }

    if (!found) {
        System.out.println("Expense not found");
    }
}

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    }  
}  
  
private static void sortExpenses(ArrayList<Integer> arrayList) {  
    int arlength = arrayList.size();  
    Collections.sort(arrayList);  
    System.out.println("Expenses sorted in ascending order: " + arlength);  
}  
}
```