Fix Bugs of the Application

Coding

```
package fixbugs;
import java.util.ArrayList;
import java.util.Scanner;
import java.util.Collections;

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"};
        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();
        System.out.println("Enter the expense you need to search:\t");
       Scanner sc = new Scanner(System.in);
         int expence = sc.nextInt();
        int res = Collections.binarySearch(arrayList,expence);
        System.out.println("serching expendure at:  " + res);
        System.out.println("\n");
        }
    private static void sortExpenses(ArrayList<Integer> arrayList) {
        int arrlength =  arrayList.size();
        Collections.sort(arrayList);
        System.out.println("the sorted list is :  " + arrayList);
        System.out.println("\n");

       //Complete the method. The expenses should be sorted in ascending order.
    }
}
```