Worksheet - 6

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BRANCH – CSE BTECH
SEC – WM 902 B
SUB -JAVA LAB

1. Aim/Overview of the practical:

Write a Program to perform the basic operations like insert, delete, display and search in list. List contains String object items where these operations are to be performed.

2. Code:

```java
import java.util.Scanner;
import java.util.ArrayList;

public class exp6{
        public static void main(String[] args) {

                ArrayList<String> a1 = new ArrayList<>();
                Scanner sc = new Scanner(System.in);
                String s = "";

                System.out.println("Following are the operations:\n1) Insert \n2) Search \n3) Delete \n4) Display \n5) Exit");

                while(true) {
                        System.out.println("\nEnter your choice:");
                        int ch = sc.nextInt();

                        switch (ch) {
                                case 1 -> {
                                        System.out.println("Enter the element to be inserted:");
                                        s = sc.next();
                                        a1.add(s);
```

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```java
                                System.out.println("Inserted successfully!");
                }
                case 2 -> {
                        System.out.println("Enter the element to search:");
                        s = sc.next();
                        for (int i = 0; i < a1.size(); i++) {
                        if (a1.get(i).equals(s)) {
                                        System.out.println("Element found at " + i + " index");
                                        break;
                                }
                                if (i == a1.size() - 1) {
                                        System.out.println("Item not found in the list.");
                                }
                        }
                }
                case 3 -> {
                        System.out.println("Enter the item to delete:");
                        s = sc.next();
                        for (int i = 0; i < a1.size(); i++) {
                        if (a1.get(i).equals(s)) {
                                        a1.remove(i);
                                        System.out.println("Deleted successfully!");
                                        break;
                                }
                                if (i == a1.size() - 1)
                                        System.out.println("Element does not exist");
                        }
                }
                case 4 -> {
                        System.out.println("Elements in the list are:");
                        for (String value : a1) {
        System.out.print(value + "");
                        }
                }
                case 5 -> System.exit(1);
                default -> System.out.println("Invalid choice!");
            }
        }
    }
}
```

3. Result/Output:

```
Problems   @ Javadoc   Declaration   Console ×
<terminated> exp6 [Java Application] /Users/konichivo/Library/Java/JavaVirtualMachi
Following are the operations:
1) Insert
2) Search
3) Delete
4) Display
5) Exit

Enter your choice:
1
Enter the element to be inserted:
5
Inserted successfully!

Enter your choice:
1
Enter the element to be inserted:
10
Inserted successfully!

Enter your choice:
4
```

```
Elements in the list are:
5 10
Enter your choice:
2
Enter the element to search:
5
Element found at 0 index

Enter your choice:
3
Enter the item to delete:
5
Deleted successfully!

Enter your choice:
4
Elements in the list are:
10
Enter your choice:
5
|
```

Learning outcomes (What I have learnt):

1.Learnt about the concept of ArrayList and its functions such as add, remove and size.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			