



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment – 2.3

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Branch: BE-CSE

Semester: 06

Subject Name: Project-Based Learning
in Java with Lab

UID: 21BCS2856

Section: KRG_CC_1-B

Date of Performance:

Subject Code: 21CSH-319

Aim:

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.

Code:

```
package jatin;
import java.util.*;
public class exp6 {
    private static void insert(ArrayList<String> list, String item){
        list.add(item);
        System.out.println(item + " inserted successfully.");
    }
    private static void delete(ArrayList<String> list, String item){
        if (list.remove(item))
            System.out.println(item + " deleted successfully.");
        else
            System.out.println(item + " not found in the list.");
    }
    private static void display(ArrayList<String> list){
        if (list.isEmpty()){
            System.out.println("List is empty.");
        } else {
            System.out.println("List contents:");
            for (String item : list)
                System.out.println(item);
        }
    }
    private static void search(ArrayList<String> list, String item){
        if (list.contains(item))
```



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```
        System.out.println(item + " found in the list.");
    else
        System.out.println(item + " not found in the list.");
}

public static void main(String[] args){
    ArrayList<String> stringList = new ArrayList<>();
    Scanner scanner = new Scanner(System.in);
    boolean running = true;
    while (running){
        System.out.println("\nSelect an option:");
        System.out.println("1. Insert");
        System.out.println("2. Delete");
        System.out.println("3. Display");
        System.out.println("4. Search");
        System.out.println("5. Exit");
        int choice = scanner.nextInt();
        scanner.nextLine();
        switch (choice){
            case 1:
                System.out.println("Enter the string to insert:");
                String insertString = scanner.nextLine();
                insert(stringList, insertString);
                break;
            case 2:
                System.out.println("Enter the string to delete:");
                String deleteString = scanner.nextLine();
                delete(stringList, deleteString);
                break;
            case 3:
                display(stringList);
                break;
            case 4:
                System.out.println("Enter the string to search:");
                String searchString = scanner.nextLine();
                search(stringList, searchString);
                break;
            case 5:
```



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```
        running = false;
        System.out.println("Exiting...");
        break;
    default:
        System.out.println("Invalid choice!");
    }
}
scanner.close();
}
```

Output:

The screenshot displays the Eclipse IDE interface. The left sidebar shows the project structure with 'jatin' as the main project, containing 'src' and 'exp6.java'. The main editor window shows the source code of 'exp6.java', which implements a menu-driven application for managing a list of strings. The code includes methods for inserting, deleting, displaying, and searching for items in the list. The console window on the right shows the execution output, which matches the provided 'Output' text. The application starts by displaying a menu with options 1 to 5. The user enters '1' to insert the string 'Jatin', which is then displayed in the list. The user enters '3' to display the list contents, showing 'Jatin'. The user enters '4' to search for 'Jatin', which is found. Finally, the user enters '5' to exit the application.

```
1 package jatin;
2 import java.util.*;
3 public class exp6 {
4     private static void insert(ArrayList<String> list, String item){
5         list.add(item);
6         System.out.println(item + " inserted successfully.");
7     }
8     private static void delete(ArrayList<String> list, String item){
9         if (list.remove(item))
10            System.out.println(item + " deleted successfully.");
11        else
12            System.out.println(item + " not found in the list.");
13    }
14    private static void display(ArrayList<String> list){
15        if (list.isEmpty()){
16            System.out.println("List is empty.");
17        } else {
18            System.out.println("List contents:");
19            for (String item : list)
20                System.out.println(item);
21        }
22    }
23    private static void search(ArrayList<String> list, String item){
24        if (list.contains(item))
25            System.out.println(item + " found in the list.");
26        else
27            System.out.println(item + " not found in the list.");
28    }
29    public static void main(String[] args){
30        ArrayList<String> stringList = new ArrayList<>();
31        Scanner scanner = new Scanner(System.in);
32        boolean running = true;
33        while (running){
34            System.out.println("\nSelect an option:");
35            System.out.println("1. Insert");
36            System.out.println("2. Delete");
37            System.out.println("3. Display");
38            System.out.println("4. Search");
39            System.out.println("5. Exit");
40            int choice = scanner.nextInt();
41            scanner.nextLine();
42            switch (choice){
```

Console Output:

```
<terminated> exp6 [Java Application] C:\Program Files\Java\jdk-18.0.2\bin\javaw.exe (Mar 1, 2024, 12:17:11 PM) [f
Select an option:
1. Insert
2. Delete
3. Display
4. Search
5. Exit
1
Enter the string to insert:
Jatin
Jatin inserted successfully.

Select an option:
1. Insert
2. Delete
3. Display
4. Search
5. Exit
3
List contents:
Jatin

Select an option:
1. Insert
2. Delete
3. Display
4. Search
5. Exit
4
Enter the string to search:
Jatin
Jatin found in the list.

Select an option:
1. Insert
2. Delete
3. Display
4. Search
5. Exit
5
Exiting...
```