# Experiment 2.3

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**Semester: 5** **Date of Performance: 14/9/2022**
**Subject Name: PBLJ Lab** **Subject Code: 20CSP-321**

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. Software/Hardware Requirements:**

- **Laptop**
- **Eclipse IDE**

**3. Algorithm /pseudo code:**

This program performs the basic operations like insertion, deletion, display and searching in list.

Public class main{

{

Create list and take user input using Scanner sc = new Scanner(System.in)

While {

Print out the menu like for insertion press 1 and so on

{

Use switch cases to store different blocks of code and to execute the following case which the user choose from the menu

}

}

}

## 4. Steps for experiment/practical/Code:

```
import java.util.*;

public class Main {

    public static void main(String[] args) {
        List<String> list = new ArrayList<String>();
        int status = 1;
        Scanner sc = new Scanner(System.in);
        while (status == 1) {
System.out.println("Kindly choose an option");
System.out.println("1. Insert in list");
System.out.println("2. Delete from list");
System.out.println("3. Search in list");
System.out.println("4. Display List");
System.out.println("5. Exit");
            int c = sc.nextInt();
            String s = " ";
            switch (c) {
                case 1:
System.out.println("Enter the element that you want to insert");
                    s = sc.next();
list.add(s);
System.out.println("Element inserted successfully");
                    break;
                case 2:
System.out.println("Enter the element that you want to delete");
                    s = sc.next();
                    for (int i = 0; i<list.size(); i++) {

                        if (list.get(i).equalsIgnoreCase(s)) {
System.out.println(list.get(i) + " removed from list");
list.remove(list.get(i));

                        }
```

```
                    }
                    break;

                case 3:
System.out.println("Enter the element that you want to search");
                    s = sc.next();
                    int flag = 0;
                    for (int i = 0; i<list.size(); i++) {

                        if (list.get(i).equalsIgnoreCase(s)) {
System.out.println(list.get(i));
System.out.println(list.get(i) + " found at index " + i);
                            flag = 1;
                        }
                    }
                    if (flag != 1) {
System.out.println("Item not found");
                    }
                    break;

                case 4:
                    for (int i = 0; i<list.size(); i++) {

System.out.println(list.get(i));

                    }
                    break;

                case 5:
                    status = 0;
                    break;

                default:
System.out.println("Invalid input");

            }

        }
    }
}
```

## 5. Result/Output/Writing Summary:

```
PS A:\DSA> cd "a:\DSA\" ; if ($?) { javac Main.java } ; if ($?) { java Main }
Kindly choose an option
1. Insert in list
2. Delete from list
3. Search in list
4. Display List
5. Exit
1
Enter the element that you want to insert
Apple
Element inserted successfully
Kindly choose an option
1. Insert in list
2. Delete from list
3. Search in list
4. Display List
5. Exit
1
Enter the element that you want to insert
Banana
Element inserted successfully
Kindly choose an option
1. Insert in list
2. Delete from list
3. Search in list
4. Display List
5. Exit
3
Enter the element that you want to search
apple
Apple
Apple found at index 0
```

**Learning outcomes (What I have learnt):**

1. Learnt about use of collections, ArrayList.
2. Learnt about various operation of ArrayList**.**