

<b>Ex No:04</b>	<b>ARRAY LIST</b>
<b>Date:16.08.19</b>	

**Aim:**

To develop a java console application to perform string operations.

**Requirement:**

Write functions for the following

- a. Append - add at end
- b. Insert – add at particular index
- c. Search
- d. List all string starts with given letter

**Algorithm:**

**Step 1:** Create class StringList with static main function in package stringcollections.

**Step 2:** Use switch case to perform necessary tasks.

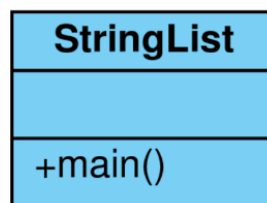
**Step 3:** Use add() method to add a string.

**Step 4:** Use same add() method to add a string at particular index.

**Step 5:** Use indexOf() method to search for a string.

**Step 6:** Compare first letter of the strings from the list with the entered letter and display those particular strings.

**Step 7:** Exit

**Class Diagram:****Program:****StringList.java**

```
/*Program to perform ArrayList
*Created by Faizul
*faizulsmart10@gmail.com
*/
```

```
package stringcollections;

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

public class StringList {

    public static void main(String[] args) {

        int option;

        int index,i;

        String n;

        Scanner sc=new Scanner(System.in);

        ArrayList<String> str;

        str=new ArrayList<String>();

        while(true)
        {
            System.out.println("1. To add a String number at the end");
            System.out.println("2. To insert a string number at particular index");
            System.out.println("3. To search for a string");
            System.out.println("4. To display all strings starting with the same letter");
            System.out.println("5. Exit");
            System.out.print("Enter your choice:");
            option=sc.nextInt();
            switch(option)
            {
                case 1:
                    System.out.print("Enter a String:");
                    n=sc.next();
```

```
str.add(n);

System.out.println("The given String is added at the end");

break;

case 2:

System.out.print("Enter a String:");

n=sc.next();

System.out.print("Enter the index:");

index=sc.nextInt();

str.add(index,n);

System.out.println("The given String is added at the given index");

break;

case 3:

System.out.print("Enter a String:");

n=sc.next();

index=str.indexOf(n);

if(index<0)

{

    System.out.println("The given String is not available in the list");

}else

{

    System.out.printf("The String %s is found at the index %d\n" ,str,index);

}

break;

case 4:

char l;

System.out.println("Enter the starting letter: ");

l=sc.next().charAt(0);
```

```

        for(i=0;i<str.size();i++)
        {
            String str1 = str.get(i);
            if(l==str1.charAt(0))
                System.out.println(str1);
        }
    break;
case 5:
    System.out.println("Thankyou for using String list application !!!");
    break;
default:
    System.out.println("Please enter a valid String !!!");
}

if(option==5)
{
    break;
}
}
}
}

```

## Output:

1. To add a string at the end
2. To insert a string at particular index
3. To search for a string

4. To display all strings starting with the same letter

5. Exit

Enter your choice:1

Enter a String:akhshy

The given String is added at the end

1. To add a string at the end

2. To insert a string at particular index

3. To search for a string

4. To display all strings starting with the same letter

5. Exit

Enter your choice:1

Enter a String:faizul

The given String is added at the end

1. To add a string at the end

2. To insert a string at particular index

3. To search for a string

4. To display all strings starting with the same letter

5. Exit

Enter your choice:1

Enter a String:sanjai

The given String is added at the end

1. To add a string at the end

2. To insert a string at particular index

3. To search for a string

4. To display all strings starting with the same letter

5. Exit

Enter your choice:2

Enter a String:abhi**jith**

Enter the index:1

The given String is added at the given index

1. To add a string at the end
2. To insert a string at particular index
3. To search for a string
4. To display all strings starting with the same letter
5. Exit

Enter your choice:3

Enter a String:faizul

The String [akhshy, abhi**jith**, faizul, sanjai] is found at the index 2

1. To add a string at the end
2. To insert a string at particular index
3. To search for a string
4. To display all strings starting with the same letter
5. Exit

Enter your choice:4

Enter the starting letter:

a

akhshy

abhi**jith**

1. To add a string at the end
2. To insert a string at particular index
3. To search for a string
4. To display all strings starting with the same letter
5. Exit

Enter your choice:5

Thankyou for using String list application !!!

**Result:**

Thus a java console application to perform string operations is verified with its output.