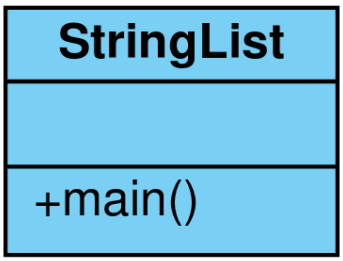
EX: 04	STRING COLLECTION APPLICATION

Aim:
To develop a java console application to perform string operations.

Requirements:
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 stringcollection.
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:
```
/*developed by: Sanjai Kumar
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*/
package stringcollection;
import java.util.*;
public class StringList {

     public static void main(String[] args) {
          int option;
          int index,i;
          String str1;
          Scanner sc=new Scanner(System.in);
          ArrayList<String> strs;
```

```
strs=new ArrayList<String>();

while(true)
{
     System.out.println("\n\n1. To add an String at the
     end");
     System.out.println("2. To insert an String at
     particular index");
     System.out.println("3. To search for a String");
     System.out.println("4. To display all the Strings
     starting with spcific 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:");
          str1=sc.next();
          strs.add(str1);
          System.out.println("The given string is added
          at the end");
          break;
     case 2:
          System.out.print("Enter a string:");
          str1=sc.next();
          System.out.print("Enter the index:");
          index=sc.nextInt();
          strs.add(index,str1);
          System.out.println("The given string is added
          at the given index");
          break;
     case 3:
          System.out.print("Enter a string:");
          str1=sc.next();
          index=strs.indexOf(str1);
          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",str1,index);
          }
          break;
     case 4:
          char l;
```

```
                    System.out.println("Enter the starting letter:
                    ");
                    l=sc.next().charAt(0);

                    for(i=0;i<strs.size();i++)
                    {
                         str1=strs.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
                    number !!!");
               }

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

     }

}
```

Output:

```
1. To add an String at the end
2. To insert an String at particular index
3. To search for a String
4. To display all the Strings starting with spcific letter
5. Exit
Enter your choice:1
Enter a String:name
The given string is added at the end


1. To add an String at the end
2. To insert an String at particular index
3. To search for a String
4. To display all the Strings starting with spcific letter
5. Exit
Enter your choice:2
Enter a string:place
Enter the index:0
The given string is added at the given index
```

```
1. To add an String at the end
2. To insert an String at particular index
3. To search for a String
4. To display all the Strings starting with spcific letter
5. Exit
Enter your choice:3
Enter a string:name
The string name is found at the index 1

1. To add an String at the end
2. To insert an String at particular index
3. To search for a String
4. To display all the Strings starting with spcific letter
5. Exit
Enter your choice:4
Enter the starting letter:
n
name
```

Result:

Thus the java program to perform String Operations is executed and its output is verified successfully.