

Expno:04	Array List
Date:16-09-2019	

Aim:

To create an array of strings where a string can be appended at the end, should be able to insert a string at

a particular index, should be able to search for a string and sort a string with a letter starting at the first.

REQUIREMENT:-

- Should be able to append a string at the end
- should be able to insert a string at a particular index
- should be able to search for string
- should be able to sort a string with letter at first
- should be able to display the array of strings

ALGORITHM:-

STEP 1: create a package String

STEP 2: create a class named StringList

STEP 3: describe the structure of array of strings

STEP 4: Declare different cases for different conditions STEP

5: mention the case for appending a string at the end

STEP 6: mention another case for inserting a string at a particular index and display the array of strings

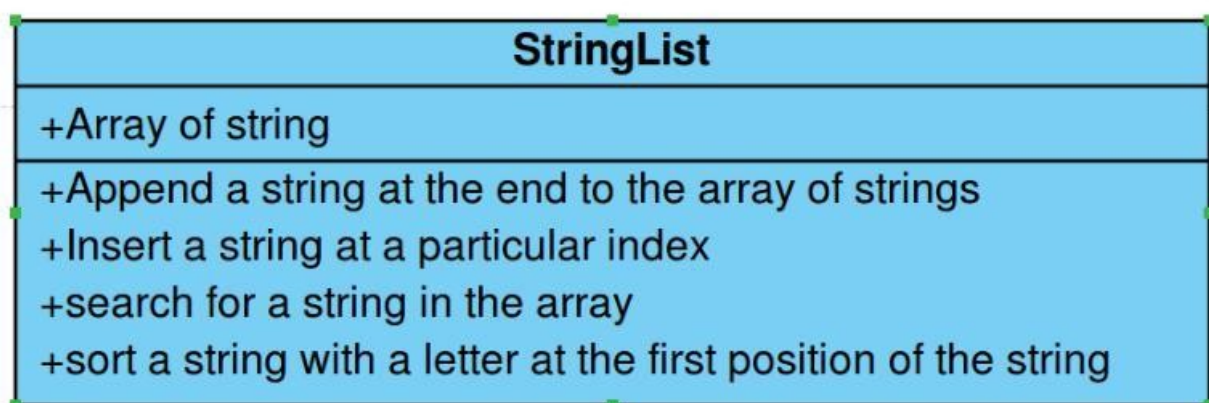
STEP 7: mention another case for searching a string in the array and display search result with the index

value of the string if the string is in the array or else print the string is unavailable

STEP 8: mention another case for sorting a string from array with a letter at first print the string if available or else print the string is not available

STEP 9: specify the condition for executing different cases

Class Diagram:



PROGRAM:

```
/**
 * created by G.Nikhil,EEE-A
 */

package String;

import java.util.*;
public class StringList {

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

        Strings=new ArrayList<String>();

        while(true) {

            System.out.println("1. To add a 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");
            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();
                Strings.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();
                Strings.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=Strings.indexOf(n);
                if(index<0)
                {
                    System.out.println("The given string is not available in
the list");
                }else
```

```

        {
            System.out.printf("The string %d is found at the index
%d\n",n,index);
        }
        break;
    case 4:
        System.out.println("The available strings are:");
        for(i=0;i<Strings.size();i++)
        {
            System.out.println(Strings.get(i));
        }
        break;
    case 5:
        System.out.println("Thankyou for using string list application
!!!");
        break;
    default:
        System.out.println("Please enter the 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 the strings
5. Exit
Enter your choice:1
Enter a stringdsdf
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 the strings
5. Exit
Enter your choice:2
Enter a stringdfsdf
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 the strings
5. Exit
Enter your choice:3
Enter a string:sasd
The given string is not available in the list

```

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

Enter your choice:4

The available strings are:

dsdf

dfsdf

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

Enter your choice:5

Thankyou for using string list application !!!

Result:

Thus the Java application for the implementation of array list of strings is programmed and implemented successfully.