

EXP NO:04	ARRAY LIST
DATE:16.08.19	

AIM:

To develop a java application to generate Array of string.

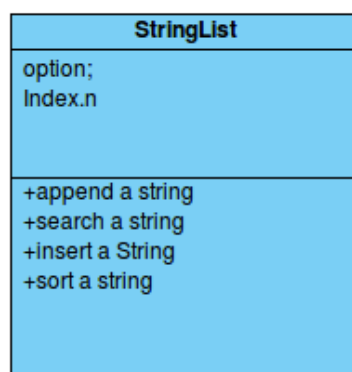
Requirement:

- 1.To add a string to array at the end.
- 2.To insert a string at particular index.
- 3.To search for a string in array.
- 4.To sort a string with a particular letter.

Algorithm:

- Step1:** Declare a package Stringcollection.
Step2: Declare a class name StringList.
Step3: Declare Array of string structure.
Step4: Define the requirement in difference case.
Step5: Declare case1 append string into the array.
Step6: Declare case2 insert any string at a particular index
Step7: Declare and specify the condition for applying the different cases.
Step8 :Display the result.

Class diagram:



Program:

```
/*  
****  
* Program for stackexception  
  
* @author M.upendra  
* 212217105032  
*/  
  
package strincollection;  
  
import java.util.*;  
  
public class Stringlist {  
  
    public static void main(String[] args) {  
        int option;  
        String n;  
        int index;  
        int i;  
        String a;  
        Scanner sc=new Scanner(System.in);  
        ArrayList<String> nums;  
  
        nums=new ArrayList<String>();  
  
        while(true)  
        {  
            System.out.println("1. 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 with letter");  
            System.out.println("5. display all");  
            System.out.println("6. Exit");  
            System.out.print("Enter your choice:");  
  
            option=sc.nextInt();  
            switch(option)  
            {  
            case 1:  
                System.out.print("Enter a String:");  
                n=sc.next();  
                nums.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();
        nums.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=nums.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 %s\n",n,index);
        }
        break;
    case 4:
        System.out.println("Enter a letter");
        a=sc.next();

        for(i=0;i<nums.size();i++)
        {
            if(nums.get(i).startsWith(a))
            {
                System.out.println(nums.get(i));
            }
        }
        break;
    case 5:
        System.out.println("The available strings are:");
        for(i=0;i<nums.size();i++)
        {
            System.out.println(nums.get(i));
        }
        break;
    case 6:
        System.out.println("Thankyou for using number list application !!!");
        break;
    default:
        System.out.println("Please enter a valid Sting!!!");
    }

    if(option==6)
    {
        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 with letter
5. display all
6. Exit
Enter your choice:1
Enter a String:raja
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 with letter
5. display all
6. Exit
Enter your choice:1
Enter a String:rani
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 with letter
5. display all
6. Exit
Enter your choice:1
Enter a String:krishna
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 with letter
5. display all
6. Exit
Enter your choice:1
Enter a String:radha
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 with letter
5. display all
6. Exit
Enter your choice:2
Enter a String:raji
```

```
Enter the index:2
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 with letter
5. display all
6. Exit
Enter your choice:4
Enter a letter
ram
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 with letter
5. display all
6. Exit
Enter your choice:5
The available strings are:
raja
rani
raji
krishna
radha
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 with letter
5. display all
6. Exit
```

Result:

Thus program for ArrayList is successfully created by Java program.

