

EXP:4	ARRAY LIST
DATE:16-08-19	

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

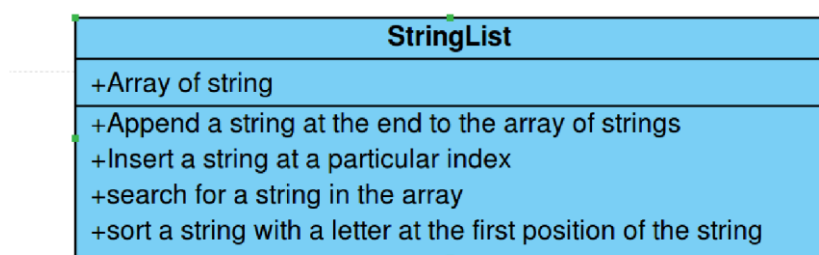
STEP 6: mention another case for inserting a string at a particular index and display the array of strings

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:

```

/**STRING COLLECTION APPLICATION
 * Created by p.sairam,EEE-B
 * 212217105044
 */ package String;
import java.util.*;
public class StringList {
  
```

```

public static void main(String[] args) { // TODO
Auto-generated method stub
int option; int
index,i;
String n;
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 a 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. To Display the strings starting with the given letter");
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(); 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 strings:");
n=sc.next();
index=strings.indexOf(n); if(index<0)
{
System.out.println("The given strings is not available in the list");
}else
{
System.out.printf("The strings %s is found at the index %s\n",n,index);
}
break;
case 4:
System.out.println("The available numbers are:");
for(i=0;i<strings.size();i++)
{
System.out.println(strings.get(i));
}
}
}
}

```

```

}
break;
case 5: System.out.println("Enter the first letter character");
n=sc.next();
for(i=0;i<strings.size();i++)
{
if(strings.get(i).startsWith(n))
{
System.out.println(strings.get(i));
} }
break;
case
6:
System.out.println("Thankyou for using strings list application !!!");
break; default:
System.out.println("Please enter a valid choice !!!");
}
if(option==6)
{ 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. To Display the strings starting with the given letter
6. Exit

Enter your choice:1

Enter a String:sairam

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. To Display the strings starting with the given letter
6. Exit

Enter your choice:2

Enter a string:maresh

Enter the index:0

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. To Display the strings starting with the given letter
6. Exit

Enter your choice:5

Enter the first letter

character s

sairam

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. To Display the strings starting with the given letter
6. Exit

Enter your choice:6

Thankyou for using strings list application !!!

RESULT:-

Hence, A java program is created for string collection application where string can be added to an array, a string can be inserted at particular index in the array, a string can be searched, a string can be sorted from array with a letter at first place in the string.