

EX: 04	STRING COLLECTION APPLICATION
16-08-19	

Aim:

To develop a java console application to perform string operations.

Requirements:

Write functions for the following

- Append - add at end
- Insert – add at particular index
- Search
- 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.

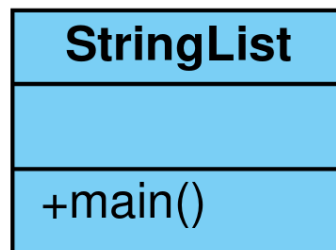
Step 4: Use same add() method to add a string at particular index.

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
* gsanjaik@gmail.com
*/
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> str;
```

```
str=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();
```

```
        str.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();
```

```
        str.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=str.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.