Write a java program that has an interface named A50 that has two methods, countloweruppperdigit which will count the total uppercase character, lowercase character and digit in a string, and another method named sortstring which will sort a string array. Another interface named B50 will inherit A50 and it also has two methods, convertupperlower which will convert all the characters from a string to uppercase or lowercase, and a method named substring which will print the last 6 characters from a string. A Class named stringexample will implement the B50 intereface, it will have a member of string type named N1 and a String array named N2 , and a constructor which will assign the value to the string members. Create object of the stringexample class and call the methods.

A[j]>A[j+1]

In c program, you can compare characters by using relational operation, if(a[i]>='a' && a[i]<='z'). However we cannot do it in java. We have to come up with another method. We have to convert the string to an array of characters by using toCharArray() function

To make comparison in string, we need to use the compareto() method [Note: you cannot use relational operator to compare strings in java]

A[j].compareto(A[j+1]) >0

If you want to print the last 6 characters it needs to be after n.length-7 and before n.length , then it will print out the last 6 characters.

```
interface A50{
    void countloweruppperdigit();
    void sortstring();
}
interface B50 extends A50{// B50 is inheriting
methods from the interface A50
    void convertupperlower();
    void substring();
}
class stringexample implements B50{// Stringexample
class has to use all the mehods from the interfaces
A50 and B50 since B50 is inheriting A50
    String n1;
    String n2[];
    stringexample(String n1, String n2[]){
        this.n1=n1;
        this.n2=n2;
    }
```

```
    public void countloweruppperdigit() {
        int countupper=0;
        int countlower=0;
        int countdigit=0;
        char l[]= n1.toCharArray();// we are
converting the string n1 to an array of characters by
using toCharArray function
        for(int i=0; i<n1.length(); i++) {

            if(l[i]>='a'&&l[i]<='z') {
                countlower++;
            }
            if(l[i]>='A'&&l[i]<='Z') {
                countupper++;
            }
            if(l[i]>='0'&&l[i]<='9') {
                countdigit++;
            }
        }
        System.out.println("Total uppercase letter is
"+countupper);
        System.out.println("Total lowercase letter is
"+countlower);
        System.out.println("TOtal digit is
"+countdigit);
    }
    public void sortstring() {
        String t;
        for(int i=0; i<n2.length; i++) {
            for(int j=0; j<n2.length-1; j++) {
                if(n2[j].compareTo(n2[j+1])>0) {//
it will compare the indexes of the string n2 by using
compareto function
                    t=n2[j];
```

```
                    n2[j]=n2[j+1];
                    n2[j+1]=t;

                }
            }
        }
        System.out.println("Sorted string array is");
        for(int i=0; i<n2.length; i++) {
            System.out.println(n2[i]); // it will
print out the sorted character array n2 based on the
first letter. The uppercase letter will always appear
before the lowercase letter.
        }
    }
    public void convertupperlower() {


System.out.println(n1.toUpperCase());//touppercase
will convert all the characters from the string n1 to
uppercase characters
        System.out.println(n1.toLowerCase());//
tolowercase will convert all the characters from the
string n1 to lowercase characters
//if you dont want to use toUppercase and toLowercase
functions
        char d[]=n1.toCharArray();
        char d2[]=n1.toCharArray();
        for(int i=0; i<n1.length(); i++) {

            if(d[i]>='A'&&d[i]<='Z') {
                d[i]=(char) ((int)d[i]+32);
       // in asscii code, if you want to convert a
character from upper to lowercase, add 32 (the
```

```
differences between uppercase and lowercase
characters in asscii code is 32)

            }
            if(d2[i]>='a'&&d2[i]<='z') {
                d2[i]=(char) ((int)d2[i]-32);
              // in asscii code, if you want to
convert a character from lower to uppercase, subtract
32 (the differences between uppercase and lowercase
characters in asscii code is 32)
            }
        }
        for(int i=0; i<d.length;i++) {
            System.out.print(d[i]);
        }
        System.out.println();
        for(int i=0; i<d2.length;i++) {
            System.out.print(d2[i]);
        }

    }
    public void substring() {
        int str1=n1.length()-7; // starting point
will be after n1.length()-7 since we are printing out
the last 6 character
        int str2=n1.length(); // ending point will be
after the last character of the string which is
n1.length
        char b[]=new char[str2-str1];// we are
storing the last 6 characters in a character array
        n1.getChars(str1, str2, b, 0);// We are using
getchars function to subtract the last 6 characters
from the string. The first parameter of the getchars
function is the starting point, 2nd one is the ending
```

```
point, 3rd one is t he destination array, and 4th one
is a default 0)
        System.out.println(b);//we are printing out
the character array b that has the last 6 characters
    }
}

public class interfaceinheritacneexample {
   public static void main(String[]args) {
   stringexample s1=new stringexample("My name is
Rafsun", new String[] {"Now","is","the","for", "and",
"but", "to", "or", "football","equal"});
   s1.substring();
   s1.sortstring();
   s1.countloweruppperdigit();
   s1.convertupperlower();
}
}
```