```java
# Program on basic String Operations

package strings;

class Student{
        int rollno;
        String name;
        String city;
        Student(int rollno, String name, String city){
                this.rollno=rollno;
                this.name=name;
                this.city=city;
        }
        public String toString(){
                return rollno+" "+name+" "+city;
        }
}


public class StringOperation {

        public static void main(String[] args) {
                // TODO Auto-generated method stub
                // Creation of String
                System.out.println("\nCreation of String\n");
                char chars[] = { 'a', 'b', 'c', 'd', 'e', 'f' };
                String s = new String(chars, 2, 3);
                System.out.println("Value of s is "+ s);

                // Creation of String with ASCII Value
                System.out.println("\nCreation of String with ASCII Value\n");
                byte ascii[] = {65, 66, 67, 68, 69, 70 };
                String s1 = new String(ascii);
                System.out.println(s1);

                // Concatenation by "+"
                System.out.println("\nConcatenation by \"+\" method\n");
                String s2="ACIT" +"Engineering";
                System.out.println(s2);

                // Concatenation by concat()
                System.out.println("\nConcatenation by concat() method\n");
                String s3="Acharya ";
                String s4=" Institute";
                String s5=s3.concat(s4);
                System.out.println(s5);

                // For toString() method
                System.out.println("\nFor toString() method\n");
                Student s6 =new Student(101,"Raj","lucknow");
                System.out.println(s6);

                // For CharAt()
                System.out.println("\nFor CharAt() method\n");
                String name="Acharya";
```

```java
        char ch=name.charAt(4);
        System.out.println(ch);

        // For getChars()
        System.out.println("\nFor getChars() method\n");
        String str = new String("Hello Kumar how r u");
        char[] ch1 = new char[10];
        str.getChars(6, 16, ch1, 0);
        System.out.println(ch);

        //     For getBytes()
        System.out.println("\nFor getBytes() method\n");
        String s7="ABCDEFG";
        byte[] barr=s7.getBytes();
        for(int i=0;i<barr.length;i++){
            System.out.println(barr[i]);
        }

        // For toCharArray()
        System.out.println("\nFor toCharArray() method\n");
        String s8="hello";
        char[] ch2=s8.toCharArray();
        for(int i=0;i<ch2.length;i++) {
            System.out.println(ch2[i]);
        }

        // For equals() and equalsIgnoreCase()
        System.out.println("\nFor equals() and equalsIgnoreCase() method\n");
        String s9="Kumar";
        String s10="KUMAR";
        System.out.println(s9.equals(s10));
        System.out.println(s9.equalsIgnoreCase(s10));

        //     For "==" method
        System.out.println("\nFor \"==\" method \n");
        String s11="Kumar";
        String s12=new String("Kumaa");
        System.out.println(s11==s12);

        // For compareTo() method
        System.out.println("\nFor compareTo() method\n");
        String s13="Sachin";
        String s14="Ratan";
        System.out.println(s13.compareTo(s14));

        // For startsWith() method
        System.out.println("\nFor startsWith() method\n");
        String s15="java string split method";
        System.out.println(s15.startsWith("java string"));

        // For endsWith() method
        System.out.println("\nFor endsWith() method\n");
        String s16="Acharya Institute of technology";
        System.out.println(s16.endsWith("yt"));
```

```java
            // For indexOf() method
            System.out.println("\nFor indexOf() method\n");
            String s17="this is index of example";
            int index1=s17.indexOf("is");
            int index2=s17.indexOf("index");
            System.out.println(index1+" "+index2);

            // For lastIndexOf() method
            System.out.println("\nFor lastIndexOf() method\n");
            String s18="this is index of example";
            index1=s18.lastIndexOf('s');
            System.out.println(index1);

            // For substring() method
            System.out.println("\nFor substring() method\n");
            String s19="SachinTendulkar";
            System.out.println(s19.substring(6));
            System.out.println(s19.substring(0,6));

            // For replaceString() method
            System.out.println("\nFor replaceString() method\n");
            String s20="AST is a very good college";
            String replaceString=s20.replace('S','I');
            System.out.println(replaceString);

            // For replace() method
            System.out.println("\nFor replace() method\n");
            String s21="my name is ABC my name is college";
            String replace1 =s21.replace("is","was");
            System.out.println(replace1);

            // For trim() method
            System.out.println("\nFor trim() method\n");
            String s22=" hello string ";
            System.out.println(s22+"java");
            System.out.println(s22.trim()+"java");

            // For toLowerCase() and toUpperCase() method
            System.out.println("\nFor toLowerCase() and toUpperCase() method\n");
            String string1="Acharya Institute of Technology";
            String s1lower=string1.toLowerCase();
            System.out.println(s1lower);
            String s1upper=string1.toUpperCase();
            System.out.println(s1upper);

            // For StringBuffer() with append() method
            System.out.println("\nFor StringBuffer() with append() method\n");
            StringBuffer sb=new StringBuffer("Hello ");
            sb.append("AIT");
            System.out.println(sb);

            // For StringBuffer() with insert() method
            System.out.println("\nFor StringBuffer() with insert() method\n");
            StringBuffer sb1=new StringBuffer("Hello ");
            sb1.insert(1,"AIT");
```

```java
            System.out.println(sb1);

            // For StringBuffer() with replace() method
            System.out.println("\nFor StringBuffer() with replace() method\n");
            StringBuffer sb2=new StringBuffer(" Hello World ");
            sb2.replace( 6, 11, "java");
            System.out.println(sb2);

            // For StringBuffer() with delete() and deleteCharAt() method
            System.out.println("\nFor StringBuffer() with delete() and
deleteCharAt() method\n");
            StringBuffer sb4=new StringBuffer("Hello");
            sb4.delete(1,3);
            System.out.println(sb4);

            StringBuffer sb5=new StringBuffer("This is a Test");
            sb5.deleteCharAt(3);
            System.out.println(sb5);

            // For StringBuffer() with replace() method
            System.out.println("\nFor StringBuffer() with replace() method\n");
            StringBuffer str1 = new StringBuffer("Hello");
            str1.reverse();
            System.out.println(str1);

            // For StringBuffer() with capacity() and ensureCapacity() method
            System.out.println("\nFor StringBuffer() with capacity() and
ensureCapacity() method\n");
            StringBuffer str2 = new StringBuffer();
            System.out.println( str2.capacity());

            str2.ensureCapacity(30);
            System.out.println( str2.capacity());

            // For StringBuffer() with capacity() and length() method
            System.out.println("\nFor StringBuffer() with capacity() and length()
method\n");
            StringBuffer s23=new StringBuffer("AIT");
            int p=s23.length();
            int q=s23.capacity();
            System.out.println("Length of string AIT="+p);
            System.out.println("Capacity of string AIT="+q);

            //    For StringBuffer() with  charAt() and setCharAt() method
            System.out.println("\nFor StringBuffer() with  charAt() and setCharAt()
method\n");
            StringBuffer sb6 = new StringBuffer("Hello");
            System.out.println("buffer before = " + sb6);
            System.out.println("charAt(1) before = " + sb6.charAt(1));
            sb6.setCharAt(1, 'i');
            sb6.setLength(2);
            System.out.println("buffer after = " + sb6);
            System.out.println("charAt(1) after = " + sb6.charAt(1));
    }
```

```
}
}
```

```
Creation of String

Value of s is cde

Creation of String with ASCII Value

ABCDEF

Concatenation by "+" method

ACITEngineering

Concatenation by concat() method

Acharya  Institute

For toString() method

101 Raj lucknow

For CharAt() method

r

For getChars() method

r

For getBytes() method

65
66
67
68
69
70
71

For toCharArray() method

h
e
l
l
o

For equals() and equalsIgnoreCase() method

false
```

```
true

For "==" method

false

For compareTo() method

1

For startsWith() method

true

For endsWith() method

false

For indexOf() method

2 8

For lastIndexOf() method

6

For substring() method

Tendulkar
Sachin

For replaceString() method

AIT is a very good college

For replace() method

my name was ABC my name was college

For trim() method

 hello string java
hello stringjava

For toLowerCase() and toUpperCase() method

acharya institute of technology
ACHARYA INSTITUTE OF TECHNOLOGY

For StringBuffer() with append() method

Hello AIT

For StringBuffer() with insert() method
```

```
HAITello

For StringBuffer() with replace() method

 Hellojavad

For StringBuffer() with delete() and deleteCharAt() method

Hlo
Thi is a Test

For StringBuffer() with replace() method

olleH

For StringBuffer() with capacity() and ensureCapacity() method

16
34

For StringBuffer() with capacity() and length() method

Length of string AIT=3
Capacity of string AIT=19

For StringBuffer() with  charAt() and setCharAt() method

buffer before = Hello
charAt(1) before = e
buffer after = Hi
charAt(1) after = i
```