

String comparison in Java

We can compare two given strings on the basis of content and reference.

It is used in **authentication** (by equals() method), **sorting** (by compareTo() method), **reference matching** (by == operator) etc.

There are three ways to compare String objects:

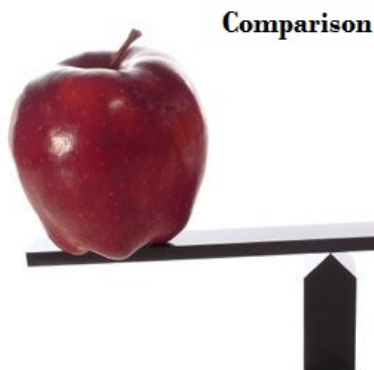
1. By equals() method
2. By == operator
3. By compareTo() method

1) By equals() method

equals() method compares the original content of the string. It compares for equality. String class provides two methods:

- **public boolean equals(Object another){}** compares this string object.
- **public boolean equalsIgnoreCase(String another){}** compares another String, ignoring case.

```
class Teststringcomparison1{  
    public static void main(String args[]){  
  
        String s1="Sachin";  
        String s2="Sachin";  
        String s3=new String("Sachin");  
        String s4="Saurav";  
  
        System.out.println(s1.equals(s2));//true  
        System.out.println(s1.equals(s3));//true  
        System.out.println(s1.equals(s4));//false  
    }  
}
```



```
}
```

Test it Now

Output:true

true

false

//Example of equalsIgnoreCase(String) method

```
class Teststringcomparison2{  
public static void main(String args[]){  
  
    String s1="Sachin";  
    String s2="SACHIN";  
  
    System.out.println(s1.equals(s2));//false  
    System.out.println(s1.equalsIgnoreCase(s3));//true  
}  
}
```

Test it Now

Output:false

true

2) By == operator

The == operator compares references not values.

//<i>Example of == operator</i>

```
class Teststringcomparison3{  
public static void main(String args[]){  
  
    String s1="Sachin";  
    String s2="Sachin";  
    String s3=new String("Sachin");  
  
    System.out.println(s1==s2);//true (because both refer to same instance)  
    System.out.println(s1==s3);//false(because s3 refers to instance created in nonpool)  
}  
}
```

Test it Now

Output:true
false

3) By compareTo() method:

compareTo() method compares values and returns an int which tells if the values compare less than, equal, or greater than.

Suppose s1 and s2 are two string variables.If:

- **s1 == s2** :0
- **s1 > s2** :positive value
- **s1 < s2** :negative value

//<i>Example of compareTo() method:</i>

```
class Teststringcomparison4{
    public static void main(String args[]){

        String s1="Sachin";
        String s2="Sachin";
        String s3="Ratan";

        System.out.println(s1.compareTo(s2));//0
        System.out.println(s1.compareTo(s3));//1(because s1>s3)
        System.out.println(s3.compareTo(s1));//-1(because s3 < s1 )
    }
}
```

Test it Now

Output:0
1
-1

[<< prev](#)[next >>](#)