

toString

```
public String toString()
```

Returns a string representation of the object.

API Note:

In general, the `toString` method returns a string that "textually represents" this object. The result should be a concise but informative representation that is easy for a person to read. It is recommended that all subclasses override this method. The string output is not necessarily stable over time or across JVM invocations.

Implementation Requirements:

The `toString` method for class `Object` returns a string consisting of the name of the class of which the object is an instance, the at-sign character '@', and the unsigned hexadecimal representation of the hash code of the object. In other words, this method returns a string equal to the value of:

```
getClass().getName() + '@' + Integer.toHexString(hashCode())
```

Returns:

a string representation of the object.

<https://docs.oracle.com/en/java/javase/19/docs/api/java.base/java/lang/Object.html>

Esempio

```
public class Cap2_5_Object { // class Main con OnlineGDB
    public static void main(String[] args) {
        Object x, y;
        x = new Object();
        y = new Object();
        System.out.println ("\nObj \t hashCode() \t toString() \t\t\t Obj");
        System.out.print ("X \t " + x.hashCode() + " \t " + x.toString() );
        System.out.println (" \t " + x);
        System.out.print ("Y \t " + y.hashCode() + " \t " + y.toString() );
        System.out.println (" \t " + y);
        if ( x.equals(y) )
            System.out.println("\nX uguale a Y : x.equals(y)= " + x.equals(y));
        else
            System.out.println("\nX diverso da Y : x.equals(y)= " + x.equals(y));
        Object a, b;
        a = new Object();
        b = a;
        System.out.println ("\nObj \t hashCode() \t toString() \t\t\t Obj");
        System.out.print ("A \t " + a.hashCode() + " \t " + a.toString());
        System.out.println (" \t " + a);
        System.out.print ("B \t " + b.hashCode() + " \t " + b.toString());
        System.out.println (" \t " + b);
        if ( a.equals(b) )
            System.out.println("\nA uguale a B : a.equals(b)= " + a.equals(b));
        else
            System.out.println("\nA diverso da B : a.equals(b)= " + a.equals(b));
    }
}
```

```
Prompt dei comandi
>>
>>javac Cap2_5_Object.java
>>java Cap2_5_Object

Obj      hashCode()      toString()      Obj
X        1072591677     java.lang.Object@3fee733d  java.lang.Object@3fee733d
Y        1746572565     java.lang.Object@681a9515  java.lang.Object@681a9515

X diverso da Y : x.equals(y)= false

Obj      hashCode()      toString()      Obj
A        1418481495     java.lang.Object@548c4f57  java.lang.Object@548c4f57
B        1418481495     java.lang.Object@548c4f57  java.lang.Object@548c4f57

A uguale a B : a.equals(b)= true
>>
```

con **JDK** :

```
>>java Cap2_5_Object
```

```
Obj      hashCode()      toString()      Obj
X        1072591677     java.lang.Object@3fee733d  java.lang.Object@3fee733d
Y        1746572565     java.lang.Object@681a9515  java.lang.Object@681a9515
```

X diverso da Y : x.equals(y)= false

```
Obj      hashCode()      toString()      Obj
A        1418481495     java.lang.Object@548c4f57  java.lang.Object@548c4f57
B        1418481495     java.lang.Object@548c4f57  java.lang.Object@548c4f57
```

A uguale a B : a.equals(b)= true

```
>>
```

con **OnlineGDB** :

```

Run Debug Stop Share Save Beautify Language Java
Main.java
1 public class Main
2 {
3     public static void main(String[] args) {
4         Object x, y;
5         x = new Object();
6         y = new Object();
7         System.out.println ("\nObj \t hashCode() \t toString() \t\t\t Obj");
8         System.out.print  ("X \t " + x.hashCode() + " \t " + x.toString() );
9         System.out.println (" \t " + x);
10        System.out.print  ("Y \t " + y.hashCode() + " \t " + y.toString() );
<
input
Obj      hashCode()      toString()      Obj
X        1608446010     java.lang.Object@5fdef03a  java.lang.Object@5fdef03a
Y        1729199940     java.lang.Object@67117f44  java.lang.Object@67117f44

X diverso da Y : x.equals(y)= false

Obj      hashCode()      toString()      Obj
A        1205044462     java.lang.Object@47d384ee  java.lang.Object@47d384ee
B        1205044462     java.lang.Object@47d384ee  java.lang.Object@47d384ee

A uguale a B : a.equals(b)= true
```