

JAVA.IO.OBJECTOUTPUTSTREAM.REPLACEOBJECT METHOD

http://www.tutorialspoint.com/java/io/objectoutputstream_replaceobject.htm

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Description

The **java.io.ObjectOutputStream.replaceObject** method will allow trusted subclasses of `ObjectOutputStream` to substitute one object for another during serialization. Replacing objects is disabled until `enableReplaceObject` is called. The `enableReplaceObject` method checks that the stream requesting to do replacement can be trusted. The first occurrence of each object written into the serialization stream is passed to `replaceObject`. Subsequent references to the object are replaced by the object returned by the original call to `replaceObject`. To ensure that the private state of objects is not unintentionally exposed, only trusted streams may use `replaceObject`.

The `ObjectOutputStream.writeObject` method takes a parameter of type `Object` as opposed to type `Serializable` to allow for cases where non-serializable objects are replaced by serializable ones.

When a subclass is replacing objects it must insure that either a complementary substitution must be made during deserialization or that the substituted object is compatible with every field where the reference will be stored. Objects whose type is not a subclass of the type of the field or array element abort the serialization by raising an exception and the object is not be stored.

This method is called only once when each object is first encountered. All subsequent references to the object will be redirected to the new object. This method should return the object to be substituted or the original object.

Null can be returned as the object to be substituted, but may cause `NullPointerException` in classes that contain references to the original object since they may be expecting an object instead of null.

Declaration

Following is the declaration for **java.io.ObjectOutputStream.replaceObject** method.

```
protected Object replaceObject(Object obj)
```

Parameters

- **obj** -- the object to be replaced

Return Value

This method returns the alternate object that replaced the specified one.

Exception

- **IOException** -- Any exception thrown by the underlying `OutputStream`.

Example

The following example shows the usage of **java.io.ObjectOutputStream.replaceObject** method.

```
package com.tutorialspoint;

import java.io.*;

public class ObjectOutputStreamDemo extends ObjectOutputStream {

    public ObjectOutputStreamDemo(OutputStream out) throws IOException {
        super(out);
    }

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

```

Object s = "Hello World!";
Object s2 = "Bye World!";
try {

    // create a new file with an ObjectOutputStream
    FileOutputStream out = new FileOutputStream("test.txt");
    ObjectOutputStreamDemo oout = new ObjectOutputStreamDemo(out);

    // write something in the file
    oout.writeObject(s);
    oout.flush();

    // enable object replacing
    oout.enableReplaceObject(true);

    // replace object
    System.out.println("" + oout.replaceObject(s2));

    // close the stream
    oout.close();

    // create an ObjectInputStream for the file we created before
    ObjectInputStream ois =
        new ObjectInputStream(new FileInputStream("test.txt"));

    // read and print an int
    System.out.println("" + (String) ois.readObject());

} catch (Exception ex) {
    ex.printStackTrace();
}
}
}

```

Let us compile and run the above program, this will produce the following result:

```

Bye World!
Hello World!

```

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