| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Externalizable.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/io/EOFException.html)   [**NEXT CLASS**](http://docs.google.com/java/io/File.html) | [**FRAMES**](http://docs.google.com/index.html?java/io/Externalizable.html)    [**NO FRAMES**](http://docs.google.com/Externalizable.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#2et92p0) |

## **java.io**

Interface Externalizable

**All Superinterfaces:** [Serializable](http://docs.google.com/java/io/Serializable.html) **All Known Subinterfaces:** [RemoteRef](http://docs.google.com/java/rmi/server/RemoteRef.html), [ServerRef](http://docs.google.com/java/rmi/server/ServerRef.html) **All Known Implementing Classes:** [ActivationDataFlavor](http://docs.google.com/javax/activation/ActivationDataFlavor.html), [DataFlavor](http://docs.google.com/java/awt/datatransfer/DataFlavor.html), [MimeType](http://docs.google.com/javax/activation/MimeType.html), [MLet](http://docs.google.com/javax/management/loading/MLet.html), [PrivateMLet](http://docs.google.com/javax/management/loading/PrivateMLet.html)

public interface **Externalizable**extends [Serializable](http://docs.google.com/java/io/Serializable.html)

Only the identity of the class of an Externalizable instance is written in the serialization stream and it is the responsibility of the class to save and restore the contents of its instances. The writeExternal and readExternal methods of the Externalizable interface are implemented by a class to give the class complete control over the format and contents of the stream for an object and its supertypes. These methods must explicitly coordinate with the supertype to save its state. These methods supersede customized implementations of writeObject and readObject methods.

Object Serialization uses the Serializable and Externalizable interfaces. Object persistence mechanisms can use them as well. Each object to be stored is tested for the Externalizable interface. If the object supports Externalizable, the writeExternal method is called. If the object does not support Externalizable and does implement Serializable, the object is saved using ObjectOutputStream.

When an Externalizable object is reconstructed, an instance is created using the public no-arg constructor, then the readExternal method called. Serializable objects are restored by reading them from an ObjectInputStream.

An Externalizable instance can designate a substitution object via the writeReplace and readResolve methods documented in the Serializable interface.

**Since:** JDK1.1 **See Also:**[ObjectOutputStream](http://docs.google.com/java/io/ObjectOutputStream.html), [ObjectInputStream](http://docs.google.com/java/io/ObjectInputStream.html), [ObjectOutput](http://docs.google.com/java/io/ObjectOutput.html), [ObjectInput](http://docs.google.com/java/io/ObjectInput.html), [Serializable](http://docs.google.com/java/io/Serializable.html)

| **Method Summary** | |
| --- | --- |
| void | [**readExternal**](http://docs.google.com/java/io/Externalizable.html#readExternal(java.io.ObjectInput))([ObjectInput](http://docs.google.com/java/io/ObjectInput.html) in)            The object implements the readExternal method to restore its contents by calling the methods of DataInput for primitive types and readObject for objects, strings and arrays. |
| void | [**writeExternal**](http://docs.google.com/java/io/Externalizable.html#writeExternal(java.io.ObjectOutput))([ObjectOutput](http://docs.google.com/java/io/ObjectOutput.html) out)            The object implements the writeExternal method to save its contents by calling the methods of DataOutput for its primitive values or calling the writeObject method of ObjectOutput for objects, strings, and arrays. |

| **Method Detail** |
| --- |

### writeExternal

void **writeExternal**([ObjectOutput](http://docs.google.com/java/io/ObjectOutput.html) out)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

The object implements the writeExternal method to save its contents by calling the methods of DataOutput for its primitive values or calling the writeObject method of ObjectOutput for objects, strings, and arrays.

**Parameters:**out - the stream to write the object to **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - Includes any I/O exceptions that may occur

### readExternal

void **readExternal**([ObjectInput](http://docs.google.com/java/io/ObjectInput.html) in)  
 throws [IOException](http://docs.google.com/java/io/IOException.html),  
 [ClassNotFoundException](http://docs.google.com/java/lang/ClassNotFoundException.html)

The object implements the readExternal method to restore its contents by calling the methods of DataInput for primitive types and readObject for objects, strings and arrays. The readExternal method must read the values in the same sequence and with the same types as were written by writeExternal.

**Parameters:**in - the stream to read data from in order to restore the object **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if I/O errors occur [ClassNotFoundException](http://docs.google.com/java/lang/ClassNotFoundException.html) - If the class for an object being restored cannot be found.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Externalizable.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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