| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/OutputStreamWriter.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/OutputStream.html)   [**NEXT CLASS**](http://docs.google.com/java/io/PipedInputStream.html) | [**FRAMES**](http://docs.google.com/index.html?java/io/OutputStreamWriter.html)    [**NO FRAMES**](http://docs.google.com/OutputStreamWriter.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#2et92p0) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: FIELD | [CONSTR](#2s8eyo1) | [METHOD](#35nkun2) |

## **java.io**

Class OutputStreamWriter

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.io.Writer](http://docs.google.com/java/io/Writer.html)  
 **java.io.OutputStreamWriter**

**All Implemented Interfaces:** [Closeable](http://docs.google.com/java/io/Closeable.html), [Flushable](http://docs.google.com/java/io/Flushable.html), [Appendable](http://docs.google.com/java/lang/Appendable.html) **Direct Known Subclasses:** [FileWriter](http://docs.google.com/java/io/FileWriter.html)

public class **OutputStreamWriter**extends [Writer](http://docs.google.com/java/io/Writer.html)

An OutputStreamWriter is a bridge from character streams to byte streams: Characters written to it are encoded into bytes using a specified [charset](http://docs.google.com/java/nio/charset/Charset.html). The charset that it uses may be specified by name or may be given explicitly, or the platform's default charset may be accepted.

Each invocation of a write() method causes the encoding converter to be invoked on the given character(s). The resulting bytes are accumulated in a buffer before being written to the underlying output stream. The size of this buffer may be specified, but by default it is large enough for most purposes. Note that the characters passed to the write() methods are not buffered.

For top efficiency, consider wrapping an OutputStreamWriter within a BufferedWriter so as to avoid frequent converter invocations. For example:

Writer out  
 = new BufferedWriter(new OutputStreamWriter(System.out));

A *surrogate pair* is a character represented by a sequence of two char values: A *high* surrogate in the range '\uD800' to '\uDBFF' followed by a *low* surrogate in the range '\uDC00' to '\uDFFF'.

A *malformed surrogate element* is a high surrogate that is not followed by a low surrogate or a low surrogate that is not preceded by a high surrogate.

This class always replaces malformed surrogate elements and unmappable character sequences with the charset's default *substitution sequence*. The [CharsetEncoder](http://docs.google.com/java/nio/charset/CharsetEncoder.html) class should be used when more control over the encoding process is required.

**Since:** JDK1.1 **See Also:**[BufferedWriter](http://docs.google.com/java/io/BufferedWriter.html), [OutputStream](http://docs.google.com/java/io/OutputStream.html), [Charset](http://docs.google.com/java/nio/charset/Charset.html)

| **Field Summary** | |
| --- | --- |

| **Fields inherited from class java.io.**[**Writer**](http://docs.google.com/java/io/Writer.html) |
| --- |
| [lock](http://docs.google.com/java/io/Writer.html#lock) |

| **Constructor Summary** | |
| --- | --- |
| [**OutputStreamWriter**](http://docs.google.com/java/io/OutputStreamWriter.html#OutputStreamWriter(java.io.OutputStream))([OutputStream](http://docs.google.com/java/io/OutputStream.html) out)            Creates an OutputStreamWriter that uses the default character encoding. |
| [**OutputStreamWriter**](http://docs.google.com/java/io/OutputStreamWriter.html#OutputStreamWriter(java.io.OutputStream,%20java.nio.charset.Charset))([OutputStream](http://docs.google.com/java/io/OutputStream.html) out, [Charset](http://docs.google.com/java/nio/charset/Charset.html) cs)            Creates an OutputStreamWriter that uses the given charset. |
| [**OutputStreamWriter**](http://docs.google.com/java/io/OutputStreamWriter.html#OutputStreamWriter(java.io.OutputStream,%20java.nio.charset.CharsetEncoder))([OutputStream](http://docs.google.com/java/io/OutputStream.html) out, [CharsetEncoder](http://docs.google.com/java/nio/charset/CharsetEncoder.html) enc)            Creates an OutputStreamWriter that uses the given charset encoder. |
| [**OutputStreamWriter**](http://docs.google.com/java/io/OutputStreamWriter.html#OutputStreamWriter(java.io.OutputStream,%20java.lang.String))([OutputStream](http://docs.google.com/java/io/OutputStream.html) out, [String](http://docs.google.com/java/lang/String.html) charsetName)            Creates an OutputStreamWriter that uses the named charset. |

| **Method Summary** | |
| --- | --- |
| void | [**close**](http://docs.google.com/java/io/OutputStreamWriter.html#close())()            Closes the stream, flushing it first. |
| void | [**flush**](http://docs.google.com/java/io/OutputStreamWriter.html#flush())()            Flushes the stream. |
| [String](http://docs.google.com/java/lang/String.html) | [**getEncoding**](http://docs.google.com/java/io/OutputStreamWriter.html#getEncoding())()            Returns the name of the character encoding being used by this stream. |
| void | [**write**](http://docs.google.com/java/io/OutputStreamWriter.html#write(char%5B%5D,%20int,%20int))(char[] cbuf, int off, int len)            Writes a portion of an array of characters. |
| void | [**write**](http://docs.google.com/java/io/OutputStreamWriter.html#write(int))(int c)            Writes a single character. |
| void | [**write**](http://docs.google.com/java/io/OutputStreamWriter.html#write(java.lang.String,%20int,%20int))([String](http://docs.google.com/java/lang/String.html) str, int off, int len)            Writes a portion of a string. |

| **Methods inherited from class java.io.**[**Writer**](http://docs.google.com/java/io/Writer.html) |
| --- |
| [append](http://docs.google.com/java/io/Writer.html#append(char)), [append](http://docs.google.com/java/io/Writer.html#append(java.lang.CharSequence)), [append](http://docs.google.com/java/io/Writer.html#append(java.lang.CharSequence,%20int,%20int)), [write](http://docs.google.com/java/io/Writer.html#write(char%5B%5D)), [write](http://docs.google.com/java/io/Writer.html#write(java.lang.String)) |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Constructor Detail** |
| --- |

### OutputStreamWriter

public **OutputStreamWriter**([OutputStream](http://docs.google.com/java/io/OutputStream.html) out,  
 [String](http://docs.google.com/java/lang/String.html) charsetName)  
 throws [UnsupportedEncodingException](http://docs.google.com/java/io/UnsupportedEncodingException.html)

Creates an OutputStreamWriter that uses the named charset.

**Parameters:**out - An OutputStreamcharsetName - The name of a supported [charset](http://docs.google.com/java/nio/charset/Charset.html) **Throws:** [UnsupportedEncodingException](http://docs.google.com/java/io/UnsupportedEncodingException.html) - If the named encoding is not supported

### OutputStreamWriter

public **OutputStreamWriter**([OutputStream](http://docs.google.com/java/io/OutputStream.html) out)

Creates an OutputStreamWriter that uses the default character encoding.

**Parameters:**out - An OutputStream

### OutputStreamWriter

public **OutputStreamWriter**([OutputStream](http://docs.google.com/java/io/OutputStream.html) out,  
 [Charset](http://docs.google.com/java/nio/charset/Charset.html) cs)

Creates an OutputStreamWriter that uses the given charset.

**Parameters:**out - An OutputStreamcs - A charset**Since:** 1.4

### OutputStreamWriter

public **OutputStreamWriter**([OutputStream](http://docs.google.com/java/io/OutputStream.html) out,  
 [CharsetEncoder](http://docs.google.com/java/nio/charset/CharsetEncoder.html) enc)

Creates an OutputStreamWriter that uses the given charset encoder.

**Parameters:**out - An OutputStreamenc - A charset encoder**Since:** 1.4

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

### getEncoding

public [String](http://docs.google.com/java/lang/String.html) **getEncoding**()

Returns the name of the character encoding being used by this stream.

If the encoding has an historical name then that name is returned; otherwise the encoding's canonical name is returned.

If this instance was created with the [OutputStreamWriter(OutputStream, String)](http://docs.google.com/java/io/OutputStreamWriter.html#OutputStreamWriter(java.io.OutputStream,%20java.lang.String)) constructor then the returned name, being unique for the encoding, may differ from the name passed to the constructor. This method may return null if the stream has been closed.

**Returns:**The historical name of this encoding, or possibly null if the stream has been closed**See Also:**[Charset](http://docs.google.com/java/nio/charset/Charset.html)

### write

public void **write**(int c)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a single character.

**Overrides:**[write](http://docs.google.com/java/io/Writer.html#write(int)) in class [Writer](http://docs.google.com/java/io/Writer.html) **Parameters:**c - int specifying a character to be written **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - If an I/O error occurs

### write

public void **write**(char[] cbuf,  
 int off,  
 int len)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a portion of an array of characters.

**Specified by:**[write](http://docs.google.com/java/io/Writer.html#write(char%5B%5D,%20int,%20int)) in class [Writer](http://docs.google.com/java/io/Writer.html) **Parameters:**cbuf - Buffer of charactersoff - Offset from which to start writing characterslen - Number of characters to write **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - If an I/O error occurs

### write

public void **write**([String](http://docs.google.com/java/lang/String.html) str,  
 int off,  
 int len)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a portion of a string.

**Overrides:**[write](http://docs.google.com/java/io/Writer.html#write(java.lang.String,%20int,%20int)) in class [Writer](http://docs.google.com/java/io/Writer.html) **Parameters:**str - A Stringoff - Offset from which to start writing characterslen - Number of characters to write **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - If an I/O error occurs

### flush

public void **flush**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Flushes the stream.

**Specified by:**[flush](http://docs.google.com/java/io/Flushable.html#flush()) in interface [Flushable](http://docs.google.com/java/io/Flushable.html)**Specified by:**[flush](http://docs.google.com/java/io/Writer.html#flush()) in class [Writer](http://docs.google.com/java/io/Writer.html) **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - If an I/O error occurs

### close

public void **close**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

**Description copied from class:** [**Writer**](http://docs.google.com/java/io/Writer.html#close()) Closes the stream, flushing it first. Once the stream has been closed, further write() or flush() invocations will cause an IOException to be thrown. Closing a previously closed stream has no effect.

**Specified by:**[close](http://docs.google.com/java/io/Closeable.html#close()) in interface [Closeable](http://docs.google.com/java/io/Closeable.html)**Specified by:**[close](http://docs.google.com/java/io/Writer.html#close()) in class [Writer](http://docs.google.com/java/io/Writer.html) **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - If an I/O error occurs

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/OutputStreamWriter.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/OutputStream.html)   [**NEXT CLASS**](http://docs.google.com/java/io/PipedInputStream.html) | [**FRAMES**](http://docs.google.com/index.html?java/io/OutputStreamWriter.html)    [**NO FRAMES**](http://docs.google.com/OutputStreamWriter.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#2et92p0) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: FIELD | [CONSTR](#2s8eyo1) | [METHOD](#35nkun2) |

[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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