| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DataOutputStream.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/DataOutput.html)   [**NEXT CLASS**](http://docs.google.com/java/io/EOFException.html) | [**FRAMES**](http://docs.google.com/index.html?java/io/DataOutputStream.html)    [**NO FRAMES**](http://docs.google.com/DataOutputStream.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: [FIELD](#17dp8vu) | [CONSTR](#26in1rg) | [METHOD](#35nkun2) |

## **java.io**

Class DataOutputStream

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.io.OutputStream](http://docs.google.com/java/io/OutputStream.html)  
 [java.io.FilterOutputStream](http://docs.google.com/java/io/FilterOutputStream.html)  
 **java.io.DataOutputStream**

**All Implemented Interfaces:** [Closeable](http://docs.google.com/java/io/Closeable.html), [DataOutput](http://docs.google.com/java/io/DataOutput.html), [Flushable](http://docs.google.com/java/io/Flushable.html)

public class **DataOutputStream**extends [FilterOutputStream](http://docs.google.com/java/io/FilterOutputStream.html)implements [DataOutput](http://docs.google.com/java/io/DataOutput.html)

A data output stream lets an application write primitive Java data types to an output stream in a portable way. An application can then use a data input stream to read the data back in.

**Since:** JDK1.0 **See Also:**[DataInputStream](http://docs.google.com/java/io/DataInputStream.html)

| **Field Summary** | |
| --- | --- |
| protected  int | [**written**](http://docs.google.com/java/io/DataOutputStream.html#written)            The number of bytes written to the data output stream so far. |

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

| **Constructor Summary** | |
| --- | --- |
| [**DataOutputStream**](http://docs.google.com/java/io/DataOutputStream.html#DataOutputStream(java.io.OutputStream))([OutputStream](http://docs.google.com/java/io/OutputStream.html) out)            Creates a new data output stream to write data to the specified underlying output stream. |

| **Method Summary** | |
| --- | --- |
| void | [**flush**](http://docs.google.com/java/io/DataOutputStream.html#flush())()            Flushes this data output stream. |
| int | [**size**](http://docs.google.com/java/io/DataOutputStream.html#size())()            Returns the current value of the counter written, the number of bytes written to this data output stream so far. |
| void | [**write**](http://docs.google.com/java/io/DataOutputStream.html#write(byte%5B%5D,%20int,%20int))(byte[] b, int off, int len)            Writes len bytes from the specified byte array starting at offset off to the underlying output stream. |
| void | [**write**](http://docs.google.com/java/io/DataOutputStream.html#write(int))(int b)            Writes the specified byte (the low eight bits of the argument b) to the underlying output stream. |
| void | [**writeBoolean**](http://docs.google.com/java/io/DataOutputStream.html#writeBoolean(boolean))(boolean v)            Writes a boolean to the underlying output stream as a 1-byte value. |
| void | [**writeByte**](http://docs.google.com/java/io/DataOutputStream.html#writeByte(int))(int v)            Writes out a byte to the underlying output stream as a 1-byte value. |
| void | [**writeBytes**](http://docs.google.com/java/io/DataOutputStream.html#writeBytes(java.lang.String))([String](http://docs.google.com/java/lang/String.html) s)            Writes out the string to the underlying output stream as a sequence of bytes. |
| void | [**writeChar**](http://docs.google.com/java/io/DataOutputStream.html#writeChar(int))(int v)            Writes a char to the underlying output stream as a 2-byte value, high byte first. |
| void | [**writeChars**](http://docs.google.com/java/io/DataOutputStream.html#writeChars(java.lang.String))([String](http://docs.google.com/java/lang/String.html) s)            Writes a string to the underlying output stream as a sequence of characters. |
| void | [**writeDouble**](http://docs.google.com/java/io/DataOutputStream.html#writeDouble(double))(double v)            Converts the double argument to a long using the doubleToLongBits method in class Double, and then writes that long value to the underlying output stream as an 8-byte quantity, high byte first. |
| void | [**writeFloat**](http://docs.google.com/java/io/DataOutputStream.html#writeFloat(float))(float v)            Converts the float argument to an int using the floatToIntBits method in class Float, and then writes that int value to the underlying output stream as a 4-byte quantity, high byte first. |
| void | [**writeInt**](http://docs.google.com/java/io/DataOutputStream.html#writeInt(int))(int v)            Writes an int to the underlying output stream as four bytes, high byte first. |
| void | [**writeLong**](http://docs.google.com/java/io/DataOutputStream.html#writeLong(long))(long v)            Writes a long to the underlying output stream as eight bytes, high byte first. |
| void | [**writeShort**](http://docs.google.com/java/io/DataOutputStream.html#writeShort(int))(int v)            Writes a short to the underlying output stream as two bytes, high byte first. |
| void | [**writeUTF**](http://docs.google.com/java/io/DataOutputStream.html#writeUTF(java.lang.String))([String](http://docs.google.com/java/lang/String.html) str)            Writes a string to the underlying output stream using [modified UTF-8](http://docs.google.com/DataInput.html#modified-utf-8) encoding in a machine-independent manner. |

| **Methods inherited from class java.io.**[**FilterOutputStream**](http://docs.google.com/java/io/FilterOutputStream.html) |
| --- |
| [close](http://docs.google.com/java/io/FilterOutputStream.html#close()), [write](http://docs.google.com/java/io/FilterOutputStream.html#write(byte%5B%5D)) |

| **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)) |

| **Methods inherited from interface java.io.**[**DataOutput**](http://docs.google.com/java/io/DataOutput.html) |
| --- |
| [write](http://docs.google.com/java/io/DataOutput.html#write(byte%5B%5D)) |

| **Field Detail** |
| --- |

### written

protected int **written**

The number of bytes written to the data output stream so far. If this counter overflows, it will be wrapped to Integer.MAX\_VALUE.

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

### DataOutputStream

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

Creates a new data output stream to write data to the specified underlying output stream. The counter written is set to zero.

**Parameters:**out - the underlying output stream, to be saved for later use.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

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

### write

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

Writes the specified byte (the low eight bits of the argument b) to the underlying output stream. If no exception is thrown, the counter written is incremented by 1.

Implements the write method of OutputStream.

**Specified by:**[write](http://docs.google.com/java/io/DataOutput.html#write(int)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html)**Overrides:**[write](http://docs.google.com/java/io/FilterOutputStream.html#write(int)) in class [FilterOutputStream](http://docs.google.com/java/io/FilterOutputStream.html) **Parameters:**b - the byte to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### write

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

Writes len bytes from the specified byte array starting at offset off to the underlying output stream. If no exception is thrown, the counter written is incremented by len.

**Specified by:**[write](http://docs.google.com/java/io/DataOutput.html#write(byte%5B%5D,%20int,%20int)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html)**Overrides:**[write](http://docs.google.com/java/io/FilterOutputStream.html#write(byte%5B%5D,%20int,%20int)) in class [FilterOutputStream](http://docs.google.com/java/io/FilterOutputStream.html) **Parameters:**b - the data.off - the start offset in the data.len - the number of bytes to write. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### flush

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

Flushes this data output stream. This forces any buffered output bytes to be written out to the stream.

The flush method of DataOutputStream calls the flush method of its underlying output stream.

**Specified by:**[flush](http://docs.google.com/java/io/Flushable.html#flush()) in interface [Flushable](http://docs.google.com/java/io/Flushable.html)**Overrides:**[flush](http://docs.google.com/java/io/FilterOutputStream.html#flush()) in class [FilterOutputStream](http://docs.google.com/java/io/FilterOutputStream.html) **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out), [OutputStream.flush()](http://docs.google.com/java/io/OutputStream.html#flush())

### writeBoolean

public final void **writeBoolean**(boolean v)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a boolean to the underlying output stream as a 1-byte value. The value true is written out as the value (byte)1; the value false is written out as the value (byte)0. If no exception is thrown, the counter written is incremented by 1.

**Specified by:**[writeBoolean](http://docs.google.com/java/io/DataOutput.html#writeBoolean(boolean)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**v - a boolean value to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### writeByte

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

Writes out a byte to the underlying output stream as a 1-byte value. If no exception is thrown, the counter written is incremented by 1.

**Specified by:**[writeByte](http://docs.google.com/java/io/DataOutput.html#writeByte(int)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**v - a byte value to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### writeShort

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

Writes a short to the underlying output stream as two bytes, high byte first. If no exception is thrown, the counter written is incremented by 2.

**Specified by:**[writeShort](http://docs.google.com/java/io/DataOutput.html#writeShort(int)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**v - a short to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### writeChar

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

Writes a char to the underlying output stream as a 2-byte value, high byte first. If no exception is thrown, the counter written is incremented by 2.

**Specified by:**[writeChar](http://docs.google.com/java/io/DataOutput.html#writeChar(int)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**v - a char value to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### writeInt

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

Writes an int to the underlying output stream as four bytes, high byte first. If no exception is thrown, the counter written is incremented by 4.

**Specified by:**[writeInt](http://docs.google.com/java/io/DataOutput.html#writeInt(int)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**v - an int to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### writeLong

public final void **writeLong**(long v)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a long to the underlying output stream as eight bytes, high byte first. In no exception is thrown, the counter written is incremented by 8.

**Specified by:**[writeLong](http://docs.google.com/java/io/DataOutput.html#writeLong(long)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**v - a long to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### writeFloat

public final void **writeFloat**(float v)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Converts the float argument to an int using the floatToIntBits method in class Float, and then writes that int value to the underlying output stream as a 4-byte quantity, high byte first. If no exception is thrown, the counter written is incremented by 4.

**Specified by:**[writeFloat](http://docs.google.com/java/io/DataOutput.html#writeFloat(float)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**v - a float value to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out), [Float.floatToIntBits(float)](http://docs.google.com/java/lang/Float.html#floatToIntBits(float))

### writeDouble

public final void **writeDouble**(double v)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Converts the double argument to a long using the doubleToLongBits method in class Double, and then writes that long value to the underlying output stream as an 8-byte quantity, high byte first. If no exception is thrown, the counter written is incremented by 8.

**Specified by:**[writeDouble](http://docs.google.com/java/io/DataOutput.html#writeDouble(double)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**v - a double value to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out), [Double.doubleToLongBits(double)](http://docs.google.com/java/lang/Double.html#doubleToLongBits(double))

### writeBytes

public final void **writeBytes**([String](http://docs.google.com/java/lang/String.html) s)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes out the string to the underlying output stream as a sequence of bytes. Each character in the string is written out, in sequence, by discarding its high eight bits. If no exception is thrown, the counter written is incremented by the length of s.

**Specified by:**[writeBytes](http://docs.google.com/java/io/DataOutput.html#writeBytes(java.lang.String)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**s - a string of bytes to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### writeChars

public final void **writeChars**([String](http://docs.google.com/java/lang/String.html) s)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a string to the underlying output stream as a sequence of characters. Each character is written to the data output stream as if by the writeChar method. If no exception is thrown, the counter written is incremented by twice the length of s.

**Specified by:**[writeChars](http://docs.google.com/java/io/DataOutput.html#writeChars(java.lang.String)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**s - a String value to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[writeChar(int)](http://docs.google.com/java/io/DataOutputStream.html#writeChar(int)), [FilterOutputStream.out](http://docs.google.com/java/io/FilterOutputStream.html#out)

### writeUTF

public final void **writeUTF**([String](http://docs.google.com/java/lang/String.html) str)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a string to the underlying output stream using [modified UTF-8](http://docs.google.com/DataInput.html#modified-utf-8) encoding in a machine-independent manner.

First, two bytes are written to the output stream as if by the writeShort method giving the number of bytes to follow. This value is the number of bytes actually written out, not the length of the string. Following the length, each character of the string is output, in sequence, using the modified UTF-8 encoding for the character. If no exception is thrown, the counter written is incremented by the total number of bytes written to the output stream. This will be at least two plus the length of str, and at most two plus thrice the length of str.

**Specified by:**[writeUTF](http://docs.google.com/java/io/DataOutput.html#writeUTF(java.lang.String)) in interface [DataOutput](http://docs.google.com/java/io/DataOutput.html) **Parameters:**str - a string to be written. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.

### size

public final int **size**()

Returns the current value of the counter written, the number of bytes written to this data output stream so far. If the counter overflows, it will be wrapped to Integer.MAX\_VALUE.

**Returns:**the value of the written field.**See Also:**[written](http://docs.google.com/java/io/DataOutputStream.html#written)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DataOutputStream.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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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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