| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DigestOutputStream.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/security/DigestInputStream.html)   [**NEXT CLASS**](http://docs.google.com/java/security/DomainCombiner.html) | [**FRAMES**](http://docs.google.com/index.html?java/security/DigestOutputStream.html)    [**NO FRAMES**](http://docs.google.com/DigestOutputStream.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: [FIELD](#2s8eyo1) | [CONSTR](#3rdcrjn) | [METHOD](#lnxbz9) |

## **java.security**

Class DigestOutputStream

[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.security.DigestOutputStream**

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

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

A transparent stream that updates the associated message digest using the bits going through the stream.

To complete the message digest computation, call one of the digest methods on the associated message digest after your calls to one of this digest ouput stream's [write](http://docs.google.com/java/security/DigestOutputStream.html#write(int)) methods.

It is possible to turn this stream on or off (see [on](http://docs.google.com/java/security/DigestOutputStream.html#on(boolean))). When it is on, a call to one of the write methods results in an update on the message digest. But when it is off, the message digest is not updated. The default is for the stream to be on.

**See Also:**[MessageDigest](http://docs.google.com/java/security/MessageDigest.html), [DigestInputStream](http://docs.google.com/java/security/DigestInputStream.html)

| **Field Summary** | |
| --- | --- |
| protected  [MessageDigest](http://docs.google.com/java/security/MessageDigest.html) | [**digest**](http://docs.google.com/java/security/DigestOutputStream.html#digest)            The message digest associated with this stream. |

| **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** | |
| --- | --- |
| [**DigestOutputStream**](http://docs.google.com/java/security/DigestOutputStream.html#DigestOutputStream(java.io.OutputStream,%20java.security.MessageDigest))([OutputStream](http://docs.google.com/java/io/OutputStream.html) stream, [MessageDigest](http://docs.google.com/java/security/MessageDigest.html) digest)            Creates a digest output stream, using the specified output stream and message digest. |

| **Method Summary** | |
| --- | --- |
| [MessageDigest](http://docs.google.com/java/security/MessageDigest.html) | [**getMessageDigest**](http://docs.google.com/java/security/DigestOutputStream.html#getMessageDigest())()            Returns the message digest associated with this stream. |
| void | [**on**](http://docs.google.com/java/security/DigestOutputStream.html#on(boolean))(boolean on)            Turns the digest function on or off. |
| void | [**setMessageDigest**](http://docs.google.com/java/security/DigestOutputStream.html#setMessageDigest(java.security.MessageDigest))([MessageDigest](http://docs.google.com/java/security/MessageDigest.html) digest)            Associates the specified message digest with this stream. |
| [String](http://docs.google.com/java/lang/String.html) | [**toString**](http://docs.google.com/java/security/DigestOutputStream.html#toString())()            Prints a string representation of this digest output stream and its associated message digest object. |
| void | [**write**](http://docs.google.com/java/security/DigestOutputStream.html#write(byte%5B%5D,%20int,%20int))(byte[] b, int off, int len)            Updates the message digest (if the digest function is on) using the specified subarray, and in any case writes the subarray to the output stream. |
| void | [**write**](http://docs.google.com/java/security/DigestOutputStream.html#write(int))(int b)            Updates the message digest (if the digest function is on) using the specified byte, and in any case writes the byte to the output stream. |

| **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()), [flush](http://docs.google.com/java/io/FilterOutputStream.html#flush()), [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()), [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)) |

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

### digest

protected [MessageDigest](http://docs.google.com/java/security/MessageDigest.html) **digest**

The message digest associated with this stream.

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

### DigestOutputStream

public **DigestOutputStream**([OutputStream](http://docs.google.com/java/io/OutputStream.html) stream,  
 [MessageDigest](http://docs.google.com/java/security/MessageDigest.html) digest)

Creates a digest output stream, using the specified output stream and message digest.

**Parameters:**stream - the output stream.digest - the message digest to associate with this stream.

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

### getMessageDigest

public [MessageDigest](http://docs.google.com/java/security/MessageDigest.html) **getMessageDigest**()

Returns the message digest associated with this stream.

**Returns:**the message digest associated with this stream.**See Also:**[setMessageDigest(java.security.MessageDigest)](http://docs.google.com/java/security/DigestOutputStream.html#setMessageDigest(java.security.MessageDigest))

### setMessageDigest

public void **setMessageDigest**([MessageDigest](http://docs.google.com/java/security/MessageDigest.html) digest)

Associates the specified message digest with this stream.

**Parameters:**digest - the message digest to be associated with this stream.**See Also:**[getMessageDigest()](http://docs.google.com/java/security/DigestOutputStream.html#getMessageDigest())

### write

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

Updates the message digest (if the digest function is on) using the specified byte, and in any case writes the byte to the output stream. That is, if the digest function is on (see [on](http://docs.google.com/java/security/DigestOutputStream.html#on(boolean))), this method calls update on the message digest associated with this stream, passing it the byte b. This method then writes the byte to the output stream, blocking until the byte is actually written.

**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 used for updating and writing to the output stream. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[MessageDigest.update(byte)](http://docs.google.com/java/security/MessageDigest.html#update(byte))

### write

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

Updates the message digest (if the digest function is on) using the specified subarray, and in any case writes the subarray to the output stream. That is, if the digest function is on (see [on](http://docs.google.com/java/security/DigestOutputStream.html#on(boolean))), this method calls update on the message digest associated with this stream, passing it the subarray specifications. This method then writes the subarray bytes to the output stream, blocking until the bytes are actually written.

**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 array containing the subarray to be used for updating and writing to the output stream.off - the offset into b of the first byte to be updated and written.len - the number of bytes of data to be updated and written from b, starting at offset off. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs.**See Also:**[MessageDigest.update(byte[], int, int)](http://docs.google.com/java/security/MessageDigest.html#update(byte%5B%5D,%20int,%20int))

### on

public void **on**(boolean on)

Turns the digest function on or off. The default is on. When it is on, a call to one of the write methods results in an update on the message digest. But when it is off, the message digest is not updated.

**Parameters:**on - true to turn the digest function on, false to turn it off.

### toString

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

Prints a string representation of this digest output stream and its associated message digest object.

**Overrides:**[toString](http://docs.google.com/java/lang/Object.html#toString()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a string representation of the object.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DigestOutputStream.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/security/DigestInputStream.html)   [**NEXT CLASS**](http://docs.google.com/java/security/DomainCombiner.html) | [**FRAMES**](http://docs.google.com/index.html?java/security/DigestOutputStream.html)    [**NO FRAMES**](http://docs.google.com/DigestOutputStream.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: [FIELD](#2s8eyo1) | [CONSTR](#3rdcrjn) | [METHOD](#lnxbz9) |

[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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