| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DigestInputStream.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/DigestException.html)   [**NEXT CLASS**](http://docs.google.com/java/security/DigestOutputStream.html) | [**FRAMES**](http://docs.google.com/index.html?java/security/DigestInputStream.html)    [**NO FRAMES**](http://docs.google.com/DigestInputStream.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 DigestInputStream

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.io.InputStream](http://docs.google.com/java/io/InputStream.html)  
 [java.io.FilterInputStream](http://docs.google.com/java/io/FilterInputStream.html)  
 **java.security.DigestInputStream**

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

public class **DigestInputStream**extends [FilterInputStream](http://docs.google.com/java/io/FilterInputStream.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 input stream's [read](http://docs.google.com/java/security/DigestInputStream.html#read()) methods.

It is possible to turn this stream on or off (see [on](http://docs.google.com/java/security/DigestInputStream.html#on(boolean))). When it is on, a call to one of the read 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.

Note that digest objects can compute only one digest (see [MessageDigest](http://docs.google.com/java/security/MessageDigest.html)), so that in order to compute intermediate digests, a caller should retain a handle onto the digest object, and clone it for each digest to be computed, leaving the orginal digest untouched.

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

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

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

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

| **Method Summary** | |
| --- | --- |
| [MessageDigest](http://docs.google.com/java/security/MessageDigest.html) | [**getMessageDigest**](http://docs.google.com/java/security/DigestInputStream.html#getMessageDigest())()            Returns the message digest associated with this stream. |
| void | [**on**](http://docs.google.com/java/security/DigestInputStream.html#on(boolean))(boolean on)            Turns the digest function on or off. |
| int | [**read**](http://docs.google.com/java/security/DigestInputStream.html#read())()            Reads a byte, and updates the message digest (if the digest function is on). |
| int | [**read**](http://docs.google.com/java/security/DigestInputStream.html#read(byte%5B%5D,%20int,%20int))(byte[] b, int off, int len)            Reads into a byte array, and updates the message digest (if the digest function is on). |
| void | [**setMessageDigest**](http://docs.google.com/java/security/DigestInputStream.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/DigestInputStream.html#toString())()            Prints a string representation of this digest input stream and its associated message digest object. |

| **Methods inherited from class java.io.**[**FilterInputStream**](http://docs.google.com/java/io/FilterInputStream.html) |
| --- |
| [available](http://docs.google.com/java/io/FilterInputStream.html#available()), [close](http://docs.google.com/java/io/FilterInputStream.html#close()), [mark](http://docs.google.com/java/io/FilterInputStream.html#mark(int)), [markSupported](http://docs.google.com/java/io/FilterInputStream.html#markSupported()), [read](http://docs.google.com/java/io/FilterInputStream.html#read(byte%5B%5D)), [reset](http://docs.google.com/java/io/FilterInputStream.html#reset()), [skip](http://docs.google.com/java/io/FilterInputStream.html#skip(long)) |

| **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** |
| --- |

### DigestInputStream

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

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

**Parameters:**stream - the input 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/DigestInputStream.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/DigestInputStream.html#getMessageDigest())

### read

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

Reads a byte, and updates the message digest (if the digest function is on). That is, this method reads a byte from the input stream, blocking until the byte is actually read. If the digest function is on (see [on](http://docs.google.com/java/security/DigestInputStream.html#on(boolean))), this method will then call update on the message digest associated with this stream, passing it the byte read.

**Overrides:**[read](http://docs.google.com/java/io/FilterInputStream.html#read()) in class [FilterInputStream](http://docs.google.com/java/io/FilterInputStream.html) **Returns:**the byte read. **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))

### read

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

Reads into a byte array, and updates the message digest (if the digest function is on). That is, this method reads up to len bytes from the input stream into the array b, starting at offset off. This method blocks until the data is actually read. If the digest function is on (see [on](http://docs.google.com/java/security/DigestInputStream.html#on(boolean))), this method will then call update on the message digest associated with this stream, passing it the data.

**Overrides:**[read](http://docs.google.com/java/io/FilterInputStream.html#read(byte%5B%5D,%20int,%20int)) in class [FilterInputStream](http://docs.google.com/java/io/FilterInputStream.html) **Parameters:**b - the array into which the data is read.off - the starting offset into b of where the data should be placed.len - the maximum number of bytes to be read from the input stream into b, starting at offset off. **Returns:**the actual number of bytes read. This is less than len if the end of the stream is reached prior to reading len bytes. -1 is returned if no bytes were read because the end of the stream had already been reached when the call was made. **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 read 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 input 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/DigestInputStream.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/DigestException.html)   [**NEXT CLASS**](http://docs.google.com/java/security/DigestOutputStream.html) | [**FRAMES**](http://docs.google.com/index.html?java/security/DigestInputStream.html)    [**NO FRAMES**](http://docs.google.com/DigestInputStream.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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