| | [**Overview**](http://docs.google.com/overview-summary.html) | **Package** | Class | [**Use**](http://docs.google.com/package-use.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 PACKAGE**](http://docs.google.com/java/nio/channels/spi/package-summary.html)   [**NEXT PACKAGE**](http://docs.google.com/java/nio/charset/spi/package-summary.html) | [**FRAMES**](http://docs.google.com/index.html?java/nio/charset/package-summary.html)    [**NO FRAMES**](http://docs.google.com/package-summary.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

## Package java.nio.charset

Defines charsets, decoders, and encoders, for translating between bytes and Unicode characters.

**See:**

[**Description**](#3znysh7)

| **Class Summary** | |
| --- | --- |
| [**Charset**](http://docs.google.com/java/nio/charset/Charset.html) | A named mapping between sequences of sixteen-bit Unicode [code units](http://docs.google.com/lang/Character.html#unicode) and sequences of bytes. |
| [**CharsetDecoder**](http://docs.google.com/java/nio/charset/CharsetDecoder.html) | An engine that can transform a sequence of bytes in a specific charset into a sequence of sixteen-bit Unicode characters. |
| [**CharsetEncoder**](http://docs.google.com/java/nio/charset/CharsetEncoder.html) | An engine that can transform a sequence of sixteen-bit Unicode characters into a sequence of bytes in a specific charset. |
| [**CoderResult**](http://docs.google.com/java/nio/charset/CoderResult.html) | A description of the result state of a coder. |
| [**CodingErrorAction**](http://docs.google.com/java/nio/charset/CodingErrorAction.html) | A typesafe enumeration for coding-error actions. |

| **Exception Summary** | |
| --- | --- |
| [**CharacterCodingException**](http://docs.google.com/java/nio/charset/CharacterCodingException.html) | Checked exception thrown when a character encoding or decoding error occurs. |
| [**IllegalCharsetNameException**](http://docs.google.com/java/nio/charset/IllegalCharsetNameException.html) | Unchecked exception thrown when a string that is not a [legal charset name](http://docs.google.com/Charset.html#names) is used as such. |
| [**MalformedInputException**](http://docs.google.com/java/nio/charset/MalformedInputException.html) | Checked exception thrown when an input byte sequence is not legal for given charset, or an input character sequence is not a legal sixteen-bit Unicode sequence. |
| [**UnmappableCharacterException**](http://docs.google.com/java/nio/charset/UnmappableCharacterException.html) | Checked exception thrown when an input character (or byte) sequence is valid but cannot be mapped to an output byte (or character) sequence. |
| [**UnsupportedCharsetException**](http://docs.google.com/java/nio/charset/UnsupportedCharsetException.html) | Unchecked exception thrown when no support is available for a requested charset. |

| **Error Summary** | |
| --- | --- |
| [**CoderMalfunctionError**](http://docs.google.com/java/nio/charset/CoderMalfunctionError.html) | Error thrown when the [decodeLoop](http://docs.google.com/java/nio/charset/CharsetDecoder.html#decodeLoop(java.nio.ByteBuffer,%20java.nio.CharBuffer)) method of a [CharsetDecoder](http://docs.google.com/java/nio/charset/CharsetDecoder.html), or the [encodeLoop](http://docs.google.com/java/nio/charset/CharsetEncoder.html#encodeLoop(java.nio.CharBuffer,%20java.nio.ByteBuffer)) method of a [CharsetEncoder](http://docs.google.com/java/nio/charset/CharsetEncoder.html), throws an unexpected exception. |

## Package java.nio.charset Description

Defines charsets, decoders, and encoders, for translating between bytes and Unicode characters.

| Class name | Description |
| --- | --- |
| [Charset](http://docs.google.com/java/nio/charset/Charset.html) | A named mapping between characters  and bytes |
| [CharsetDecoder](http://docs.google.com/java/nio/charset/CharsetDecoder.html) | Decodes bytes into characters |
| [CharsetEncoder](http://docs.google.com/java/nio/charset/CharsetEncoder.html) | Encodes characters into bytes |
| [CoderResult](http://docs.google.com/java/nio/charset/CoderResult.html) | Describes coder results |
| [CodingErrorAction](http://docs.google.com/java/nio/charset/CodingErrorAction.html) | Describes actions to take when  coding errors are detected |

A *charset* is named mapping between sequences of sixteen-bit Unicode characters and sequences of bytes, in the sense defined in [*RFC 2278*](http://ietf.org/rfc/rfc2278.txt). A *decoder* is an engine which transforms bytes in a specific charset into characters, and an *encoder* is an engine which transforms characters into bytes. Encoders and decoders operate on byte and character buffers. They are collectively referred to as *coders*.

The [Charset](http://docs.google.com/java/nio/charset/Charset.html) class defines methods for creating coders for a given charset and for retrieving the various names associated with a charset. It also defines static methods for testing whether a particular charset is supported, for locating charset instances by name, and for constructing a map that contains every charset for which support is available in the current Java virtual machine.

Most users will not use these classes directly; instead they will use the existing charset-related constructors and methods in the [String](http://docs.google.com/java/lang/String.html) class, together with the existing [InputStreamReader](http://docs.google.com/java/io/InputStreamReader.html) and [OutputStreamWriter](http://docs.google.com/java/io/OutputStreamWriter.html) classes, all of whose implementations have been reworked to make use of the charset facilities defined in this package. A small number of changes have been made to the [InputStreamReader](http://docs.google.com/java/io/InputStreamReader.html) and [OutputStreamWriter](http://docs.google.com/java/io/OutputStreamWriter.html) classes in order to allow explicit charset objects to be specified in the construction of instances of those classes.

Support for new charsets can be made available via the interface defined in the [CharsetProvider](http://docs.google.com/java/nio/charset/spi/CharsetProvider.html) class in the [java.nio.charset.spi](http://docs.google.com/java/nio/charset/spi/package-summary.html) package.

Unless otherwise noted, passing a null argument to a constructor or method in any class or interface in this package will cause a [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) to be thrown.

**Since:** 1.4

| | [**Overview**](http://docs.google.com/overview-summary.html) | **Package** | Class | [**Use**](http://docs.google.com/package-use.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 PACKAGE**](http://docs.google.com/java/nio/channels/spi/package-summary.html)   [**NEXT PACKAGE**](http://docs.google.com/java/nio/charset/spi/package-summary.html) | [**FRAMES**](http://docs.google.com/index.html?java/nio/charset/package-summary.html)    [**NO FRAMES**](http://docs.google.com/package-summary.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

[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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