| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | [**Class**](http://docs.google.com/java/util/concurrent/Future.html) | **Use** | [**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   NEXT | [**FRAMES**](http://docs.google.com/index.html?java/util/concurrent//class-useFuture.html)    [**NO FRAMES**](http://docs.google.com/Future.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

**Uses of Interface**

**java.util.concurrent.Future**

| Packages that use [Future](http://docs.google.com/java/util/concurrent/Future.html) | |
| --- | --- |
| [**java.util.concurrent**](#3znysh7) | Utility classes commonly useful in concurrent programming. |
| [**javax.swing**](#2et92p0) | Provides a set of "lightweight" (all-Java language) components that, to the maximum degree possible, work the same on all platforms. |
| [**javax.xml.ws**](#tyjcwt) | This package contains the core JAX-WS APIs. |

| Uses of [Future](http://docs.google.com/java/util/concurrent/Future.html) in [java.util.concurrent](http://docs.google.com/java/util/concurrent/package-summary.html) | |
| --- | --- |

| Subinterfaces of [Future](http://docs.google.com/java/util/concurrent/Future.html) in [java.util.concurrent](http://docs.google.com/java/util/concurrent/package-summary.html) | |
| --- | --- |
| interface | [**RunnableFuture<V>**](http://docs.google.com/java/util/concurrent/RunnableFuture.html)            A [Future](http://docs.google.com/java/util/concurrent/Future.html) that is [Runnable](http://docs.google.com/java/lang/Runnable.html). |
| interface | [**RunnableScheduledFuture<V>**](http://docs.google.com/java/util/concurrent/RunnableScheduledFuture.html)            A [ScheduledFuture](http://docs.google.com/java/util/concurrent/ScheduledFuture.html) that is [Runnable](http://docs.google.com/java/lang/Runnable.html). |
| interface | [**ScheduledFuture<V>**](http://docs.google.com/java/util/concurrent/ScheduledFuture.html)            A delayed result-bearing action that can be cancelled. |

| Classes in [java.util.concurrent](http://docs.google.com/java/util/concurrent/package-summary.html) that implement [Future](http://docs.google.com/java/util/concurrent/Future.html) | |
| --- | --- |
| class | [**FutureTask<V>**](http://docs.google.com/java/util/concurrent/FutureTask.html)            A cancellable asynchronous computation. |

| Methods in [java.util.concurrent](http://docs.google.com/java/util/concurrent/package-summary.html) that return [Future](http://docs.google.com/java/util/concurrent/Future.html) | |
| --- | --- |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html)> | **ExecutorCompletionService.**[**poll**](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html#poll())() |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/CompletionService.html)> | **CompletionService.**[**poll**](http://docs.google.com/java/util/concurrent/CompletionService.html#poll())()            Retrieves and removes the Future representing the next completed task or null if none are present. |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html)> | **ExecutorCompletionService.**[**poll**](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html#poll(long,%20java.util.concurrent.TimeUnit))(long timeout, [TimeUnit](http://docs.google.com/java/util/concurrent/TimeUnit.html) unit) |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/CompletionService.html)> | **CompletionService.**[**poll**](http://docs.google.com/java/util/concurrent/CompletionService.html#poll(long,%20java.util.concurrent.TimeUnit))(long timeout, [TimeUnit](http://docs.google.com/java/util/concurrent/TimeUnit.html) unit)            Retrieves and removes the Future representing the next completed task, waiting if necessary up to the specified wait time if none are yet present. |
| | <T> [Future](http://docs.google.com/java/util/concurrent/Future.html)<T> | | --- | | **ScheduledThreadPoolExecutor.**[**submit**](http://docs.google.com/java/util/concurrent/ScheduledThreadPoolExecutor.html#submit(java.util.concurrent.Callable))([Callable](http://docs.google.com/java/util/concurrent/Callable.html)<T> task) |
| | <T> [Future](http://docs.google.com/java/util/concurrent/Future.html)<T> | | --- | | **ExecutorService.**[**submit**](http://docs.google.com/java/util/concurrent/ExecutorService.html#submit(java.util.concurrent.Callable))([Callable](http://docs.google.com/java/util/concurrent/Callable.html)<T> task)            Submits a value-returning task for execution and returns a Future representing the pending results of the task. |
| | <T> [Future](http://docs.google.com/java/util/concurrent/Future.html)<T> | | --- | | **AbstractExecutorService.**[**submit**](http://docs.google.com/java/util/concurrent/AbstractExecutorService.html#submit(java.util.concurrent.Callable))([Callable](http://docs.google.com/java/util/concurrent/Callable.html)<T> task) |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html)> | **ExecutorCompletionService.**[**submit**](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html#submit(java.util.concurrent.Callable))([Callable](http://docs.google.com/java/util/concurrent/Callable.html)<[V](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html)> task) |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/CompletionService.html)> | **CompletionService.**[**submit**](http://docs.google.com/java/util/concurrent/CompletionService.html#submit(java.util.concurrent.Callable))([Callable](http://docs.google.com/java/util/concurrent/Callable.html)<[V](http://docs.google.com/java/util/concurrent/CompletionService.html)> task)            Submits a value-returning task for execution and returns a Future representing the pending results of the task. |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<?> | **ScheduledThreadPoolExecutor.**[**submit**](http://docs.google.com/java/util/concurrent/ScheduledThreadPoolExecutor.html#submit(java.lang.Runnable))([Runnable](http://docs.google.com/java/lang/Runnable.html) task) |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<?> | **ExecutorService.**[**submit**](http://docs.google.com/java/util/concurrent/ExecutorService.html#submit(java.lang.Runnable))([Runnable](http://docs.google.com/java/lang/Runnable.html) task)            Submits a Runnable task for execution and returns a Future representing that task. |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<?> | **AbstractExecutorService.**[**submit**](http://docs.google.com/java/util/concurrent/AbstractExecutorService.html#submit(java.lang.Runnable))([Runnable](http://docs.google.com/java/lang/Runnable.html) task) |
| | <T> [Future](http://docs.google.com/java/util/concurrent/Future.html)<T> | | --- | | **ScheduledThreadPoolExecutor.**[**submit**](http://docs.google.com/java/util/concurrent/ScheduledThreadPoolExecutor.html#submit(java.lang.Runnable,%20T))([Runnable](http://docs.google.com/java/lang/Runnable.html) task, T result) |
| | <T> [Future](http://docs.google.com/java/util/concurrent/Future.html)<T> | | --- | | **ExecutorService.**[**submit**](http://docs.google.com/java/util/concurrent/ExecutorService.html#submit(java.lang.Runnable,%20T))([Runnable](http://docs.google.com/java/lang/Runnable.html) task, T result)            Submits a Runnable task for execution and returns a Future representing that task. |
| | <T> [Future](http://docs.google.com/java/util/concurrent/Future.html)<T> | | --- | | **AbstractExecutorService.**[**submit**](http://docs.google.com/java/util/concurrent/AbstractExecutorService.html#submit(java.lang.Runnable,%20T))([Runnable](http://docs.google.com/java/lang/Runnable.html) task, T result) |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html)> | **ExecutorCompletionService.**[**submit**](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html#submit(java.lang.Runnable,%20V))([Runnable](http://docs.google.com/java/lang/Runnable.html) task, [V](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html) result) |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/CompletionService.html)> | **CompletionService.**[**submit**](http://docs.google.com/java/util/concurrent/CompletionService.html#submit(java.lang.Runnable,%20V))([Runnable](http://docs.google.com/java/lang/Runnable.html) task, [V](http://docs.google.com/java/util/concurrent/CompletionService.html) result)            Submits a Runnable task for execution and returns a Future representing that task. |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html)> | **ExecutorCompletionService.**[**take**](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html#take())() |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/CompletionService.html)> | **CompletionService.**[**take**](http://docs.google.com/java/util/concurrent/CompletionService.html#take())()            Retrieves and removes the Future representing the next completed task, waiting if none are yet present. |

| Methods in [java.util.concurrent](http://docs.google.com/java/util/concurrent/package-summary.html) that return types with arguments of type [Future](http://docs.google.com/java/util/concurrent/Future.html) | |
| --- | --- |
| | <T> [List](http://docs.google.com/java/util/List.html)<[Future](http://docs.google.com/java/util/concurrent/Future.html)<T>> | | --- | | **ExecutorService.**[**invokeAll**](http://docs.google.com/java/util/concurrent/ExecutorService.html#invokeAll(java.util.Collection))([Collection](http://docs.google.com/java/util/Collection.html)<? extends [Callable](http://docs.google.com/java/util/concurrent/Callable.html)<T>> tasks)            Executes the given tasks, returning a list of Futures holding their status and results when all complete. |
| | <T> [List](http://docs.google.com/java/util/List.html)<[Future](http://docs.google.com/java/util/concurrent/Future.html)<T>> | | --- | | **AbstractExecutorService.**[**invokeAll**](http://docs.google.com/java/util/concurrent/AbstractExecutorService.html#invokeAll(java.util.Collection))([Collection](http://docs.google.com/java/util/Collection.html)<? extends [Callable](http://docs.google.com/java/util/concurrent/Callable.html)<T>> tasks) |
| | <T> [List](http://docs.google.com/java/util/List.html)<[Future](http://docs.google.com/java/util/concurrent/Future.html)<T>> | | --- | | **ExecutorService.**[**invokeAll**](http://docs.google.com/java/util/concurrent/ExecutorService.html#invokeAll(java.util.Collection,%20long,%20java.util.concurrent.TimeUnit))([Collection](http://docs.google.com/java/util/Collection.html)<? extends [Callable](http://docs.google.com/java/util/concurrent/Callable.html)<T>> tasks, long timeout, [TimeUnit](http://docs.google.com/java/util/concurrent/TimeUnit.html) unit)            Executes the given tasks, returning a list of Futures holding their status and results when all complete or the timeout expires, whichever happens first. |
| | <T> [List](http://docs.google.com/java/util/List.html)<[Future](http://docs.google.com/java/util/concurrent/Future.html)<T>> | | --- | | **AbstractExecutorService.**[**invokeAll**](http://docs.google.com/java/util/concurrent/AbstractExecutorService.html#invokeAll(java.util.Collection,%20long,%20java.util.concurrent.TimeUnit))([Collection](http://docs.google.com/java/util/Collection.html)<? extends [Callable](http://docs.google.com/java/util/concurrent/Callable.html)<T>> tasks, long timeout, [TimeUnit](http://docs.google.com/java/util/concurrent/TimeUnit.html) unit) |

| Constructor parameters in [java.util.concurrent](http://docs.google.com/java/util/concurrent/package-summary.html) with type arguments of type [Future](http://docs.google.com/java/util/concurrent/Future.html) | |
| --- | --- |
| [**ExecutorCompletionService**](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html#ExecutorCompletionService(java.util.concurrent.Executor,%20java.util.concurrent.BlockingQueue))([Executor](http://docs.google.com/java/util/concurrent/Executor.html) executor, [BlockingQueue](http://docs.google.com/java/util/concurrent/BlockingQueue.html)<[Future](http://docs.google.com/java/util/concurrent/Future.html)<[V](http://docs.google.com/java/util/concurrent/ExecutorCompletionService.html)>> completionQueue)            Creates an ExecutorCompletionService using the supplied executor for base task execution and the supplied queue as its completion queue. |

| Uses of [Future](http://docs.google.com/java/util/concurrent/Future.html) in [javax.swing](http://docs.google.com/javax/swing/package-summary.html) | |
| --- | --- |

| Classes in [javax.swing](http://docs.google.com/javax/swing/package-summary.html) that implement [Future](http://docs.google.com/java/util/concurrent/Future.html) | |
| --- | --- |
| class | [**SwingWorker<T,V>**](http://docs.google.com/javax/swing/SwingWorker.html)            An abstract class to perform lengthy GUI-interacting tasks in a dedicated thread. |

| Uses of [Future](http://docs.google.com/java/util/concurrent/Future.html) in [javax.xml.ws](http://docs.google.com/javax/xml/ws/package-summary.html) | |
| --- | --- |

| Subinterfaces of [Future](http://docs.google.com/java/util/concurrent/Future.html) in [javax.xml.ws](http://docs.google.com/javax/xml/ws/package-summary.html) | |
| --- | --- |
| interface | [**Response<T>**](http://docs.google.com/javax/xml/ws/Response.html)            The Response interface provides methods used to obtain the payload and context of a message sent in response to an operation invocation. |

| Methods in [javax.xml.ws](http://docs.google.com/javax/xml/ws/package-summary.html) that return [Future](http://docs.google.com/java/util/concurrent/Future.html) | |
| --- | --- |
| [Future](http://docs.google.com/java/util/concurrent/Future.html)<?> | **Dispatch.**[**invokeAsync**](http://docs.google.com/javax/xml/ws/Dispatch.html#invokeAsync(T,%20javax.xml.ws.AsyncHandler))([T](http://docs.google.com/javax/xml/ws/Dispatch.html) msg, [AsyncHandler](http://docs.google.com/javax/xml/ws/AsyncHandler.html)<[T](http://docs.google.com/javax/xml/ws/Dispatch.html)> handler)            Invoke a service operation asynchronously. |

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | [**Class**](http://docs.google.com/java/util/concurrent/Future.html) | **Use** | [**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   NEXT | [**FRAMES**](http://docs.google.com/index.html?java/util/concurrent//class-useFuture.html)    [**NO FRAMES**](http://docs.google.com/Future.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.

Copyright 2006 Sun Microsystems, Inc. All rights reserved. Use is subject to [license terms](http://docs.google.com/legal/license.html). Also see the [documentation redistribution policy](http://java.sun.com/docs/redist.html).