

Java 6 standard edition Package List

Based on the package descriptions available at <http://java.sun.com/javase/6/docs/api/>

Essential Core Packages

| | |
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| java.lang | Classes that are fundamental to the design of the Java programming language. |
| java.util | Contains the collections framework, legacy collection classes, event model, date and time facilities, internationalization, miscellaneous utility classes (a string tokenizer, a random-number generator). |
| java.io | System input and output through data streams, serialization and the file system. |
| java.math | Arbitrary-precision integer (BigInteger) and decimal (BigDecimal) arithmetic. |
| java.text | For handling text, dates, numbers, and messages in a manner independent of natural languages. |
| java.text.spi | Service provider classes for the classes in the java.text package. |

Concurrency Support

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| java.util.concurrent | Utility classes commonly useful in concurrent programming. |
| java.util.concurrent.atomic | Toolkit supporting lock-free thread-safe programming on single variables. |
| java.util.concurrent.locks | Framework for locking and waiting for conditions that is distinct from the built-in synchronization and monitors. |

SQL and Transactions

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| java.sql | API for accessing and processing data stored in a data source (e.g. a relational database). |
| javax.sql | Provides the API for server side data source access and processing from Java. |
| javax.sql.rowset | Standard interfaces and base classes for JDBC RowSet implementations. |
| javax.sql.rowset.serial | Utility classes to allow serializable mappings between SQL types and Java data types. |
| javax.sql.rowset.spi | Third party vendor support for their implementation of a synchronization provider. |

Miscellaneous Utilities

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|-------------------|--|
| java.util.jar | Classes for reading and writing the JAR (Java ARchive) file format, which is based on the standard ZIP file format with an optional manifest file. |
| java.util.logging | Classes and interfaces of the Java™ 2 platform's core logging facilities. |
| java.util.prefs | Allows applications to store and retrieve user and system preference and configuration data. |
| java.util.regex | Classes for matching character sequences against patterns specified by regular expressions. |
| java.util.spi | Service provider classes for the classes in the java.util package. |
| java.util.zip | Classes for reading and writing the standard ZIP and GZIP file formats. |
| javax.script | Scripting API, defines Scripting Engines and provides framework for their use. |

Security and Cryptography

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| java.security | Classes and interfaces for the security framework. |
| java.security.acl | <i>This package has been superseded by the java.security package.</i> |
| java.security.cert | Handling certificates, certificate revocation lists (CRLs), and certification paths. |
| java.security.interfaces | Interfaces for generating RSA and DSA keys. |
| java.security.spec | Classes/interfaces for key specifications and algorithm parameter specifications. |
| javax.crypto | Classes and interfaces for cryptographic operations. |
| javax.crypto.interfaces | Interfaces for Diffie-Hellman keys as defined in RSA Laboratories' PKCS #3. |
| javax.crypto.spec | Classes/interfaces for key specifications and algorithm parameter specifications. |
| javax.security.auth | This package provides a framework for authentication and authorization. |
| javax.security.auth.callback | For application interaction, to display info (e.g. error and warning messages) or retrieve information (e.g. authentication data such as usernames, passwords) |
| javax.security.auth.kerberos | Utility classes related to the Kerberos network authentication protocol. |
| javax.security.auth.login | A pluggable authentication framework. |
| javax.security.auth.spi | Interface to be used for implementing pluggable authentication modules. |
| javax.security.auth.x500 | Classes to store X500 Principal and X500 Private Credentials in a Subject. |
| javax.security.cert | Provides classes for public key certificates. |
| javax.security.sasl | Contains class and interfaces for supporting SASL. |
| javax.xml.crypto | Common classes for XML cryptography. |
| javax.xml.crypto.dom | DOM-specific classes for the javax.xml.crypto package. |
| javax.xml.crypto.dsig | Classes for generating and validating XML digital signatures. |
| javax.xml.crypto.dsig.dom | DOM-specific classes for the javax.xml.crypto.dsig package. |
| javax.xml.crypto.dsig.keyinfo | Classes for parsing and processing KeyInfo elements and structures. |
| javax.xml.crypto.dsig.spec | Parameter classes for XML digital signatures. |
| org.ietf.jgss | Unified API for using security services (e.g. authentication, data integrity, data confidentiality) from various underlying security mechanisms like Kerberos. |

I/O Facilities

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| java.nio | Defines buffers (data containers), and overviews other NIO packages. |
| java.nio.channels | Defines channels (connections to entities offering I/O operations, e.g. files and sockets) and selectors (for multiplexed, non-blocking I/O operations). |
| java.nio.channels.spi | Service-provider classes for the java.nio.channels package. |
| java.nio.charset | Charsets, decoders, and encoders, for translating between bytes and Unicode chars. |
| java.nio.charset.spi | Service-provider classes for the java.nio.charset package. |

UI Accessibility

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| javax.accessibility | Contract between UI components and assistive technology that provides access to them. |
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AWT and Swing GUI facilities

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| java.awt | Classes for creating user interfaces and for painting graphics and images. |
| java.awt.color | Classes for color spaces. |
| java.awt.datatransfer | Interfaces and classes for transferring data between and within applications. |
| java.awt.dnd | Drag and Drop transfer of info between two entities linked to GUI elements. |
| java.awt.event | Interfaces and classes for dealing with events fired by AWT components. |
| java.awt.font | Classes and interface relating to fonts. |
| java.awt.geom | Java 2D classes for defining/performing 2-D geometry operations on objects. |
| java.awt.im | Classes and interfaces for the input method framework. |
| java.awt.im.spi | Interfaces for input methods that can be used with any Java runtime environment. |
| java.awt.image | Classes for creating and modifying images. |
| java.awt.image.renderable | Classes and interfaces for producing rendering-independent images. |
| java.awt.print | Classes and interfaces for a general printing API. |
| javax.swing | "Lightweight" (all-Java) components that work similarly on all platforms. |
| javax.swing.border | Classes and interface for drawing specialized borders around a Swing component. |
| javax.swing.colorchooser | Classes and interfaces used by the JColorChooser component. |
| javax.swing.event | Events fired by Swing components. |
| javax.swing.filechooser | Classes and interfaces used by the JFileChooser component. |
| javax.swing.plaf | Provides Swing with its pluggable look-and-feel capabilities. |
| javax.swing.plaf.basic | User interface objects for the Basic look and feel. |
| javax.swing.plaf.metal | User interface objects for the (default) Java look and feel (once codenamed Metal). |
| javax.swing.plaf.multi | User interface objects that combine two or more look and feels. |
| javax.swing.plaf.synth | Synth is a skinnable look and feel in which all painting is delegated. |
| javax.swing.table | Classes and interfaces for dealing with javax.swing.JTable. |
| javax.swing.text | Classes and interfaces that deal with editable and noneditable text components. |
| javax.swing.text.html | Class HTMLToolkit and supporting classes for creating HTML text editors. |
| javax.swing.text.html.parser | Default HTML parser, along with support classes. |
| javax.swing.text.rtf | Class (RTFEditorKit) for creating Rich-Text-Format text editors. |
| javax.swing.tree | Classes and interfaces for dealing with javax.swing.JTree. |
| javax.swing.undo | Support for undo/redo in applications such as text editors. |

Image and Sound I/O

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| javax.imageio | The main package of the Java Image I/O API. |
| javax.imageio.event | For synchronous notification of events during the reading and writing of images. |
| javax.imageio.metadata | Supports reading and writing metadata. |
| javax.imageio.plugins.bmp | Public classes used by the built-in BMP plug-in. |
| javax.imageio.plugins.jpeg | Classes supporting the built-in JPEG plug-in. |
| javax.imageio.spi | Plug-in interfaces for readers, writers, transcoders, streams, & a runtime registry. |
| javax.imageio.stream | Supports low-level I/O from files and streams. |
| javax.sound.midi | Interfaces and classes for I/O, sequencing, and synthesis of MIDI data. |
| javax.sound.midi.spi | Support for new MIDI devices, file readers & writers, sound bank readers. |
| javax.sound.sampled | Interfaces and classes for capture, processing, and playback of sampled audio data. |
| javax.sound.sampled.spi | Support for new audio devices, sound file readers & writers, or audio format converters. |

Print Service

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| javax.print | Principal classes and interfaces for the Java Print Service API. |
| javax.print.attribute | Describing types of Print Service attributes and their collection into attribute sets. |
| javax.print.attribute.standard | contains classes for specific printing attributes. |
| javax.print.event | contains event classes and listener interfaces. |

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XML Support

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| javax.xml | Core XML constants and functionality from the XML specifications. |
| javax.xml.bind | JAXB Client applications' runtime bindings: unmarshalling, marshalling, validation. |
| javax.xml.bind.annotation | Annotations for customizing Java program elements to XML Schema mapping. |
| javax.xml.bind.annotation.adapters | XmlAdapter etc allow arbitrary Java classes to be used with JAXB. |
| javax.xml.bind.attachment | MIME-based package processor for interpretation/creation of optimized binary data. |
| javax.xml.bind.helpers | JAXB Providers Only: partial default implementations for javax.xml.bind interfaces. |
| javax.xml.bind.util | Useful client utility classes. |
| javax.xml.datatype | XML/Java Type Mappings. |
| javax.xml.namespace | XML Namespace processing. |
| javax.xml.parsers | Provides classes allowing the processing of XML documents. |
| javax.xml.stream | |
| javax.xml.stream.events | |
| javax.xml.stream.util | |
| javax.xml.transform | APIs for processing transformation instructions & transforming source to result. |
| javax.xml.transform.dom | DOM-specific transformation APIs. |
| javax.xml.transform.sax | SAX2-specific transformation APIs. |
| javax.xml.transform.stax | Provides for STAX-specific transformation APIs. |
| javax.xml.transform.stream | Stream- and URI- specific transformation APIs. |
| javax.xml.validation | API for validation of XML documents. |
| javax.xml.xpath | API for evaluating XPath expressions and accessing evaluation environment. |
| org.w3c.dom | Interfaces for Document Object Model (DOM) — part of JAXP |
| org.w3c.dom.bootstrap | |
| org.w3c.dom.events | |
| org.w3c.dom.ls | |
| org.xml.sax | The core SAX APIs. |
| org.xml.sax.ext | Interfaces to SAX2 facilities that conformant SAX drivers won't necessarily support. |
| org.xml.sax.helpers | "Helper" classes, including support for bootstrapping SAX-based applications. |

Applets and Web Services

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|---------------------------|---|
| java.applet | Classes to create an applet and enable it to communicate with its applet context. |
| javax.jws | Java Web Services |
| javax.jws.soap | Support for SOAP and Java Web Services |
| javax.xml.soap | The API for creating and building SOAP messages. |
| javax.xml.ws | The core JAX-WS APIs. |
| javax.xml.ws.handler | Defines APIs for message handlers. |
| javax.xml.ws.handler.soap | Defines APIs for SOAP message handlers. |
| javax.xml.ws.http | Defines APIs specific to the HTTP binding. |
| javax.xml.ws.soap | Defines APIs specific to the SOAP binding. |
| javax.xml.ws.spi | Defines SPIs for JAX-WS 2.0. |

Reflection, JVM Internals, Annotations and Language Modelling

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|-----------------------------|--|
| java.lang.annotation | Support for the Java programming language annotation facility. |
| java.lang.instrument | Services that allow Java agents to instrument programs running on the JVM. |
| java.lang.management | Monitoring/management interface for the JVM and underlying OS. |
| java.lang.ref | Reference-object classes for limited interaction with the garbage collector. |
| java.lang.reflect | Classes/interfaces for obtaining reflective information about classes and objects. |
| javax.annotation | |
| javax.annotation.processing | Annotation processor declaration and communication with a tool environment. |
| javax.lang.model | Classes and hierarchies of packages used to model the Java programming language. |
| javax.lang.model.element | Interfaces used to model elements of the Java programming language. |
| javax.lang.model.type | Interfaces used to model Java programming language types. |
| javax.lang.model.util | Utilities to assist in the processing of program elements and types. |
| javax.tools | Interfaces for tools which can be invoked from a program, for example, compilers. |

Management Extensions

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| javax.management | Core classes for the Java Management Extensions. |
| javax.management.loading | Advanced dynamic loading. |
| javax.management.modelmbean | Definition of the ModelMBean classes. |
| javax.management.monitor | Definition of the monitor classes. |
| javax.management.openmbean | Open data types and Open MBean descriptor classes. |
| javax.management.relation | Definition of the Relation Service. |
| javax.management.remote | Interfaces for remote access to JMX MBean servers. |
| javax.management.remote.rmi | JMX Remote API connector: transmit client requests to remote MBean server using RMI. |
| javax.management.timer | Definition of the Timer MBean. |

Networked and Distributed Programming

| | |
|------------------------|---|
| java.net | Classes for implementing networking applications. |
| javax.net | Provides classes for networking applications. |
| javax.net.ssl | Provides classes for the secure socket package. |
| java.rmi | Provides the RMI package, for distributed programming using RPC. |
| java.rmi.activation | Support for RMI Object Activation. |
| java.rmi.dgc | Classes and interface for RMI distributed garbage-collection (DGC). |
| java.rmi.registry | Class and two interfaces for the RMI registry (simple name server). |
| java.rmi.server | Classes and interfaces for supporting the server side of RMI. |
| javax.rmi | Contains user APIs for RMI-IIOP. |
| javax.rmi.CORBA | Contains portability APIs for RMI-IIOP. |
| javax.rmi.ssl | RMI client & server socket factories for SSL and TLS protocols. |
| org.omg.stub.java.rmi | RMI-IIOP Stubs for the Remote types that occur in the java.rmi package. |
| javax.naming | Provides the classes and interfaces for accessing naming services. |
| javax.naming.directory | Extends javax.naming to provide functionality for accessing directory services. |
| javax.naming.event | Supports event notification when accessing naming and directory services. |
| javax.naming.ldap | Provides support for LDAPv3 extended operations and controls. |
| javax.naming.spi | Gives dynamic plug-in support for accessing naming and directory services. |

CORBA

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| javax.transaction | Exceptions thrown by the ORB machinery during unmarshalling. |
| javax.transaction.xa | Contract API for transaction manager (TM) & resource manager (RM). TM enlists/delists resource objects (from RM driver) in JTA transactions |
| javax.activity | Activity service unmarshalling exceptions thrown by ORB machinery. |
| org.omg.CORBA | Maps OMG CORBA APIs to Java, includes a fully-functional ORB. |
| org.omg.CORBA_2_3 | Accommodates recent revisions to the CORBA API. |
| org.omg.CORBA_2_3.portable | Input and output of value types, and updates org/omg/CORBA/portable. |
| org.omg.CORBA.DynAnyPackage | DynAny exceptions (InvalidValue, Invalid, InvalidSeq, TypeMismatch). |
| org.omg.CORBA.ORBPackage | InvalidName and InconsistentTypeCode exceptions. |
| org.omg.CORBA.portable | Portability: code from one vendor can run on another vendor's ORB. |
| org.omg.CORBA.TypeCodePackage | User-defined BadKind and Bounds exceptions, used class TypeCode. |
| org.omg.CosNaming | Provides a naming service for Java IDL. |
| org.omg.CosNaming.NamingContextExtPackage | Provides classes used in org.omg.CosNaming.NamingContextExt |
| org.omg.CosNaming.NamingContextPackage | Exception classes for the org.omg.CosNaming package. |
| org.omg.Dynamic | Dynamic module for OMG Portable Interceptor specification |
| org.omg.DynamicAny | Allows runtime traversal an any, extracting primitive constituents. |
| org.omg.DynamicAny.DynAnyFactoryPackage | Classes/exceptions from DynAnyFactory interface of DynamicAny |
| org.omg.DynamicAny.DynAnyPackage | Classes/exceptions from DynAny interface of DynamicAny |
| org.omg.IOP | IOP module |
| org.omg.IOP.CodecFactoryPackage | Exceptions for IOP::CodecFactory interface (PortableInterceptors spec) |
| org.omg.IOP.CodecPackage | Generated from the IOP::Codec IDL interface definition. |
| org.omg.Messaging | Messaging module specified in the OMG CORBA Messaging spec |
| org.omg.PortableInterceptor | Internal ORB hooks: services can intercept normal flow of execution. |
| org.omg.PortableInterceptor.ORBInitInfoPackage | ORBInitInfo exceptions & typedefs (PortableInterceptor module) |
| org.omg.PortableServer | Makes server side of applications portable across multivendor ORBs. |
| org.omg.PortableServer.CurrentPackage | Access to the identity of the object on which the method was invoked. |
| org.omg.PortableServer.POAManagerPackage | Encapsulates the processing state of the POAs it is associated with. |
| org.omg.PortableServer.POAPackage | Construct object implementations portable between different ORBs. |
| org.omg.PortableServer.portable | Makes server side of applications portable across multivendor ORBs. |
| org.omg.PortableServer.ServantLocatorPackage | Classes and interfaces for locating the servant. |
| org.omg.SendingContext | Support for marshalling of value types. |
| org.omg.stub.java.rmi | Contains RMI-IIOP Stubs for java.rmi Remote types |

Component Management

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|------------------------|---|
| java.beans | Bean development support. |
| java.beans.beancontext | Provides classes and interfaces relating to bean context. |
| javax.activation | |

This sheet lists the packages contained in Java SE 6. Other Java packages are available, including, for example:

Java 3D, JMF, JMX, JWS, JINI, JXTA

See: <http://java.sun.com/reference/api/> for details.

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