Apache Ant Java build tool

CONCEPTS

Ant reads build.xml in the current directory. Run with no target and it runs the project's default target.

Project build.xml, default target

Target named step, depends on others

Task javac, jar, copy ...

Properties are immutable: the first definition wins, so -D on the command line overrides build.xml.

RUN

ant
Run the project's default target

ant *<target>* **[***<target>***...]**
Run targets in order

ant -projecthelp / ant -p
List targets that have a description

ant -buildfile *<file>* **/ ant -f** *<file>*
Use a different build file

ant -find [*<file>***] / ant -s [***<file>***]**
Search parent dirs for the build file

ant -version
Print Ant version

ant -diagnostics
Print Java, classpath and Ant diagnostics

ant -help / ant -h
Show command line options

ant -keep-going / ant -k
Continue with targets not depending on a failure

PROPERTIES AND OUTPUT

ant -D*<name>***=***<value>*
Set a property from the command line

ant -quiet / ant -q
Less output

ant -verbose / ant -v
Extra output

ANT_OPTS="-Xmx1g" ant
Pass options to the JVM

BUILD FILE BASICS

<project name="<n>" **default="***<target>***" basedir="."***>*
Root element

<target name="<n>" **depends="***<a>***,***<b>***" description="***<text>***"***>*
Define a target

<property name="<n>" **value="***<v>***"/>**
Define a property

<property file="build.properties"/>
Load properties from a file

${*<name>***}**
Reference a property

<path id="<id>"><fileset dir="lib" includes=".jar"/></path>*
Reusable classpath

<fileset dir="<d>" **includes="**/*.java" excludes="***<pat>***"/>**
Select files by pattern

COMMON TASKS

*<mkdir dir="<d>"***/>**
Create a directory

*<delete dir="<d>"***/>**
Remove a directory tree

*<copy todir="<d>"><fileset dir="<s>"***/>***</copy>***
Copy files

<javac srcdir="src" destdir="build/classes" classpathref="<id>" **includeantruntime="false"/>**
Compile Java sources

*<jar destfile="dist/<n>***.jar" basedir="build/classes"/>**
Build a jar

*<manifest><attribute name="Main-Class" value="<cls>"***/>***</manifest>***
Set jar manifest (inside <jar>)

<java classname="<cls>" **classpathref="***<id>***" fork="true"/>**
Run a Java class

<junit printsummary="yes" haltonfailure="yes">
Run JUnit tests