



Lecture 2A Introduction to ANT

- Written by James Duncan Davidson.
- Like GNU Make but specifically for Java.
- Good for bundling and delivery of groups of classes, jars, wars.
- Handles dependencies automatically.
- Written in XML.
- Works on Unix or Windows.
- Available from Apache.org.
- Built in to Eclipse.

Ant Concepts

- Exactly one **project** element is required.
- There may be many **properties**, **targets** and **tasks**.
- At least one target is required.
- Targets describe broad goals.
- Tasks are nested within targets.
- Over 100 **core tasks** available (e.g. mkdir, javac).
- Properties are name-value pairs.
- Ant interprets the build file with a breadth first traversal across the XML elements under project
- Inside a target, Ant performs a depth first traversal.
- By default, Ant breaks at the first error.

“Hello World” In Ant

```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Hello OCT" default = "Both" basedir = ".">

  <property name = "HelloText" value="Hello"/>
  <property name = "HelloOCT" value="OCT"/>

  <target name="Hello">
    <echo> ${HelloText} </echo>
  </target>

  <target name = "OCT">
    <echo> ${HelloOCT} </echo>
  </target>

  <target name = "Both" depends = "Hello,OCT"/>

</project>
```