

# Productivity tools for distributed development

An introduction

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- Ant
  - Why / Why not?
  - Tasks
- Specific tools
  - Checkstyle
  - CVS
  - JavaDoc
  - JUnit
- Other build tools

# Disclaimer

- Only Java is treated
- Little experience, only “best practice” advice

# Ant

- Java build tool
- XML file with “targets”
- Plug-ins available as JAR files

# Why / why not?

- Cross-platform
  - Commands
  - XML based build file
  - Possibility for platform specific commands
- Simple format for creating tasks
- No command-line execution needed
- Ensure identical builds
- Open source
- Incorporates common tools
- Extensible

# Build tasks

- <XML example / explanation>
- Resolution of build target dependencies

# Specific tools

- Checkstyle
  - Rules for code structure
- CVS
  - See other lecture
- JavaDoc
  - Easy documentation of your build
- Junit
  - See other lecture

# Other build tools

- Make



# Application references

- Ant: <http://ant.apache.org/>
- Checkstyle: <http://checkstyle.sourceforge.net/>
  - Ant task: <http://checkstyle.sourceforge.net/anttask.html>
- CVS: <https://www.cvshome.org/>
  - Ant task: <http://ant.apache.org/manual/CoreTasks/cvs.html>
- JavaDoc: <http://java.sun.com/j2se/javadoc/>
  - Ant task:  
<http://ant.apache.org/manual/CoreTasks/javadoc.html>
- JUnit: <http://www.junit.org/>
  - Ant task:  
<http://ant.apache.org/manual/OptionalTasks/junit.html>

# Best practice references

- 15 Ant best practices:  
[http://www.onjava.com/pub/a/onjava/2003/12/17/ant\\_bestpractices.html](http://www.onjava.com/pub/a/onjava/2003/12/17/ant_bestpractices.html)
- CVS and Ant build files:  
<http://www.russellbeattie.com/notebook/1001249.html>
- Automation with Ant:  
<http://www.javaworld.com/javaworld/jw-10-2000/jw-1020-ant.html>
- Building with Ant:  
<http://www.developer.com/tech/article.php/989631>

# Example build files

- <http://jakarta.apache.org/tomcat/tomcat-5.0-doc/appdev/build.xml.txt>