Javadoc
The Plan

• What is Javadoc?
• Writing Javadoc comments
• Using the Javadoc tool
• Demo
• Practice
What is Javadoc?

Javadoc is a way to comment your code that enables automatic generation of web pages that document your code.

Why use Javadoc?

- It's much faster than generating webpages documenting your code.
- It's standard documentation which means it's easy to use and the structure is given.
Writing Javadoc Comment

• Javadoc comments start with /*** and end with */
• The placement of the comment is important.
• The following can be commented:
  – classes
  – methods
  – instance variables
  – static variables
Commenting a Class

• Put the comment immediately before the class declaration.
• Briefly describe the purpose of the class in 2-3 sentences.
• Optionally include
  – @author tag
  – @version tag
  – others
Commenting a Method

• Put the comment immediately before the method declaration.

• Briefly describe the purpose of the method in a short phrase or 2-3 sentences. Include more detail if necessary

• Include these tags if needed
  – @param name – describes parameter
  – @return – describes the return value
Commenting
Instance and Static Variables

• Put the comment immediately before the variable declaration.

• Briefly describe the purpose of the method in a short phrase. Include more detail only if absolutely necessary.

• No tags needed.
For more information...

Visit the article:
How to Write Doc Comments for the Javadoc Tool
http://java.sun.com/j2se/javadoc/writingdoccomments/index.html
Using the Javadoc Tool

- On the command line, change into the directory where your code is.
- Type

  ```
  javadoc -subpackages [source_directory]
          -d [target_directory] -author
  ```

  all on the same line
- This generates web page documentation in `target_directory` by reading the Java source code in `source_directory`
Using the Javadoc Tool

• If your source code is in a jar file (like ours normally is), you'll first need to expand the jar file. To do this:
  
  – change directories until you are in the directory containing the jar file
  
  – list the directory's contents to make sure the jar file is in the current directory
  
  – type
    
    `jar -xvf file.jar`
Using the Javadoc Tool

• If your source code is in the current directory, use dot for the filename:

```bash
javadoc -subpackages .
  -d [target_directory] -author
```

Don't forget the dot!
Using the Javadoc Tool

• Instructions particular to our lab:
  – To get to the command line, use Java ssh: http://www.oit.duke.edu/sa/security/ssh.html
  – At the command line use
    • cd to change directories
    • ls to list a directory's contents
    • pwd to print the working directory
    • cd .. to go back a directory
  – Be sure code and documentation are in a subdirectory of public_html
Demo

1. Save Blast.jar to the Desktop.
2. Copy into public_html/cps4/homework/hwX.
3. Expand Blast.jar
4. Generate web pages using Javadoc
5. View from a web browser
6. Add Javadoc comment in Eclipse
7. Export as jar file.
8. Repeat 2-5 once with added comment.
Practice

- Put Javadoc comments in one of the previous homework assignment's source code.
- Export the source code to a jar file and put the jar file in the proper directory on your account (somewhere within public_html).
- Expand the jar file.
- Use the javadoc command to generate web page documentation.
- View the documentation on a web browser.