Java

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Outline

- HelloWorld Program
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HelloWorld Program

The "Hello World!" Program

- Your first program, HelloWorld, will simply display the greeting "Hello World!".
- To write your first program, you'll need:
 - The Java SE Development Kit 6 (JDK 6)
 - An IDE (NetBeans IDE 6.0)
- HelloWorld program:
 - HelloWorld.java

The "Hello World!" Application

- The "Hello World!" application consists of three primary components:
 - Source code comments
 - The HelloWorld class definition
 - The main method

The Comments

• The following text defines the comments:

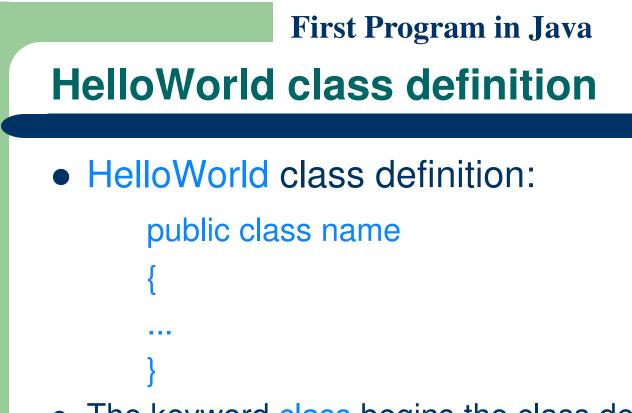
/**

* The HelloWorldApp class implements an application that * simply prints "Hello World!" to standard output. */

• Comments are ignored by the compiler but are useful to other programmers.

Source code comments

- The Java programming language supports three kinds of comments:
 - /* text */
 - The compiler ignores everything from /* to */.
 - /** documentation */
 - This indicates a documentation comment (doc comment, for short).
 - The compiler ignores this kind of comment, just like it ignores comments that use /* and */.
 - The **javadoc tool** uses doc comments when preparing automatically generated documentation.
 - // text
 - The compiler ignores everything from // to the end of the line.



- The keyword class begins the class definition for a class named name, and the code for each class appears between the opening and losing curly braces marked in bold above.
- We will classes in detail later.
- For now it is enough to know that every application begins with a class definition.

The main Method

• The following text begins the definition of the main method:

public static void main(String[] args)

The main Method

 In the Java programming language, every application must contain a main method whose signature is:

public static void main(String[] args)

- It's the entry point for your application and will subsequently call up all the other methods required by your program.
- The modifiers public and static can be written in either order (public static or static public) but the convention is to use public static

The main Method

• The main method accepts a single argument: an array of elements of type String.

public static void main(String[] args)

- You can name the argument anything you want, but most programmers choose "args" or "argv."
- This array is the mechanism through which the runtime system passes information to your application.

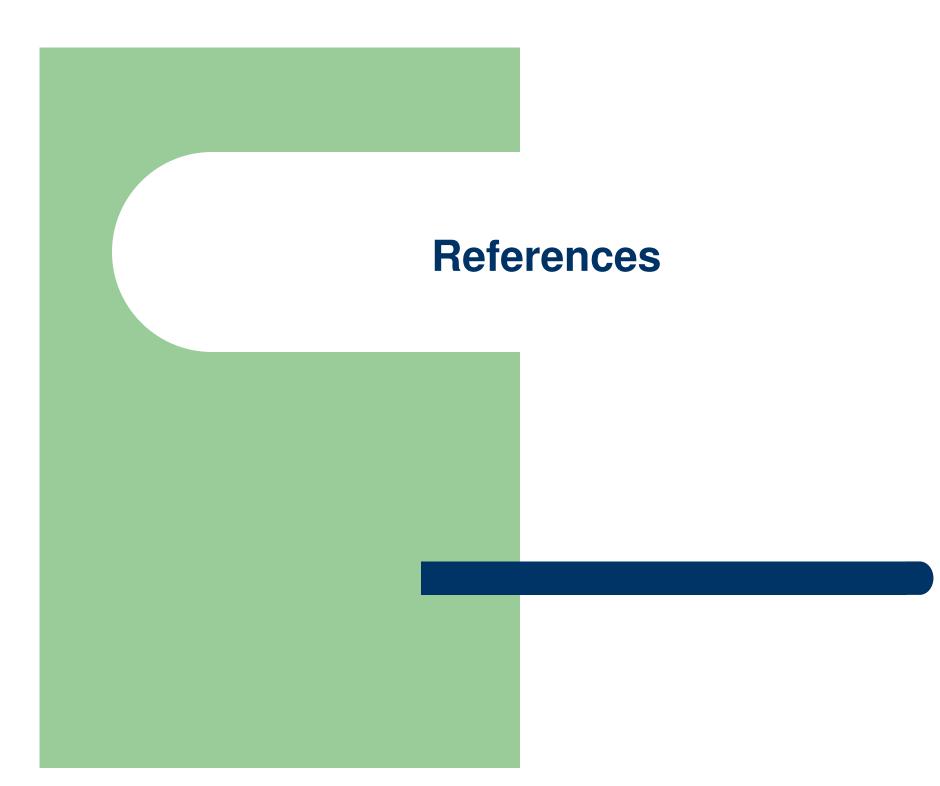
The main Method

- Each string in the array is called a commandline argument.
- **Command-line arguments** let users affect the operation of the application without recompiling it.
- The "Hello World!" application ignores its command-line arguments, but you should be aware of the fact that such arguments do exist.

The main Method

• Finally, the following line uses the System class from the API to print the "Hello World!" message to standard output:

System.out.println("Hello World!");



References

 S. Zakhour, S. Hommel, J. Royal, I. Rabinovitch, T. Risser, M. Hoeber, <u>The Java</u> <u>Tutorial: A Short Course on the Basics</u>, 4th Edition, Prentice Hall, 2006. (Chapter 1)

