Getting Started with Java

# What is a Java Program?

A Java program consists of one or more **classes** stored on disk, one per file, with a “.java” extension on each file. If a class has a **main** **method**, then it is a Java **application**. Java can also be used to create **applets**, which are programs that can run on a web page.

Each file contains a single class and must be given the name of the class it contains. So if your class is called “HelloWorld”, it must be in a file called “HelloWorld.java”. The class files are text files that can be opened and modified using a simple text editor (like notepad) or using a special Java editor like Ready to Program.

Java classes contain methods and statements. A **method** is a bunch of statements between curly brackets, with a name and a header. A **statement** is a single Java instruction ending with a **semicolon**.

Each java class must also be part of a **package**. A package is just a folder where you keep a bunch of code that goes together. So you might have a UnitOne package for all the programs you create in Unit 1, or you might have a FinalProject package for the code for your final assignment.

When you **compile** or **run** HelloWorld.java, a new file named “HelloWorld.class” is created. This is a translation of your program into a special language called **java** **bytecode**. This file can be executed by the **Java Runtime Environment**.

We will talk about these concepts a lot more in future classes…

# Why are parts of the program colored?

The Dr. Java editor color-codes parts of the program for you to make it easier to read.

**Blue**: These words are part of the core java language.

**Green**: These are comments (this stuff is not part of the program)

 **Red**: Strings (words or sentences in double quotes)

**Cyan**: Numbers

**Dark Blue**: Class and package names

# A Tour of a Java Application

c.println(“Goodbye.”);

/\*\*

\* The "Sample" class, using the ProgramTemplate.

Multiple line comments are bracketed by

/\* and \*/.

\* Created August 31, 2006.

\*

\* @author Sam Scott

\*\*/

This is the package declaration. This class must be stored in a folder called ExampleCode or it will not run.

package ExampleCode;

import hsa\_new.Console;

This is the class header. This class must be stored in a file called SampleClass.java

public class SampleClass

{

static Console c = new Console();

These curly brackets contain the whole class.

This application starts with the first statement it finds in here, and ends after it executes to the last statement. (This application does nothing at all.)

public static void main(String[] args)

{

// Your code goes here

}

Single line comments are preceded by //.

}

These curly brackets contain

the statements

in the main

method.