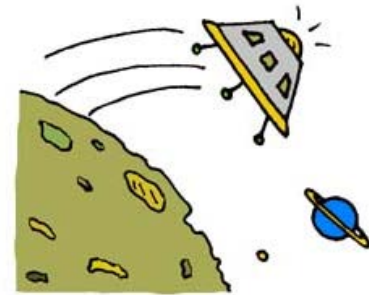# Getting Started with Java

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.");

```java
/**
 * The "Sample" class, using the ProgramTemplate.
 * Created August 31, 2006.
 *
 * @author Sam Scott
 **/

package ExampleCode;

import hsa_new.Console;

public class SampleClass
{
   static Console c = new Console();

   public static void main(String[] args)
   {
      // Your code goes here
   }
}
```

Multiple line **comments** are bracketed by /* and */.

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

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

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.)

These **curly brackets** contain the statements in the main

Single line **comments** are preceded by //.