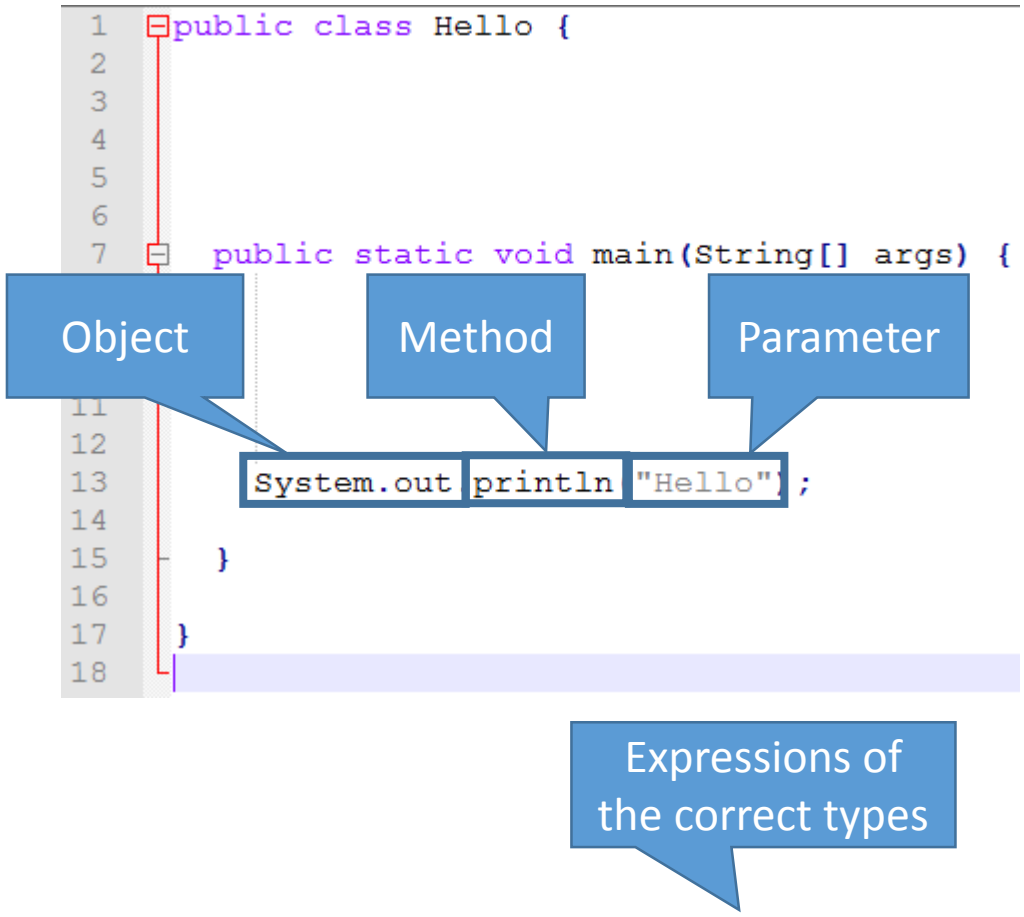
Java Review Intro

CPSC 1181 – O.O.

Jeremy Hilliker

Summer 2017

Langara.
THE COLLEGE OF HIGHER LEARNING.



objectName.methodName(parameters…)

Comments

```
// Filename: Hello.java
// Written by <your name>
// Written on <today's date>

/**This program demonstrates the use of the println()
   method to print the message Hello, World! */

public class Hello
{
   // Add comments where it is necessary.
   ...
}
```

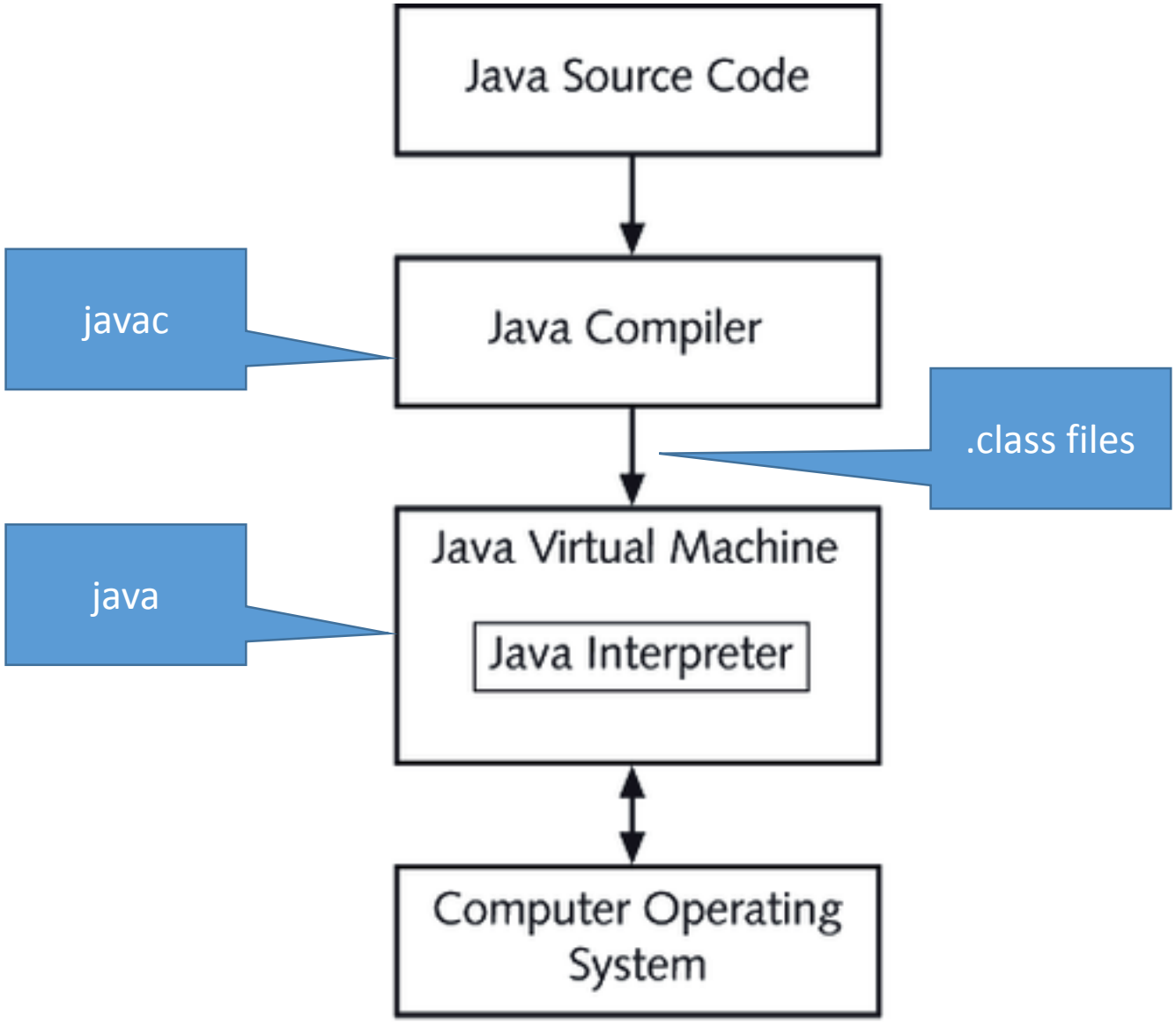
- Program Comments
  - Non executing statements that you add to a program for the purpose of documentation

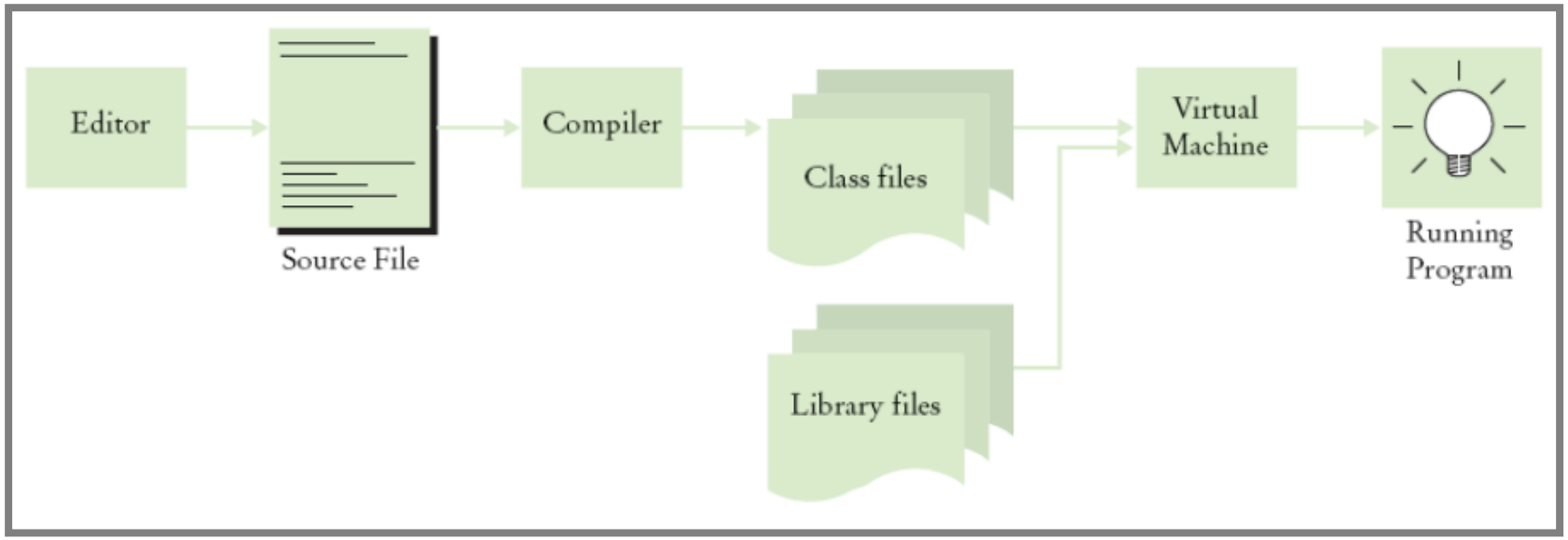
- Line comments- //
- Block comments - /* */
- javadoc comments - /** */

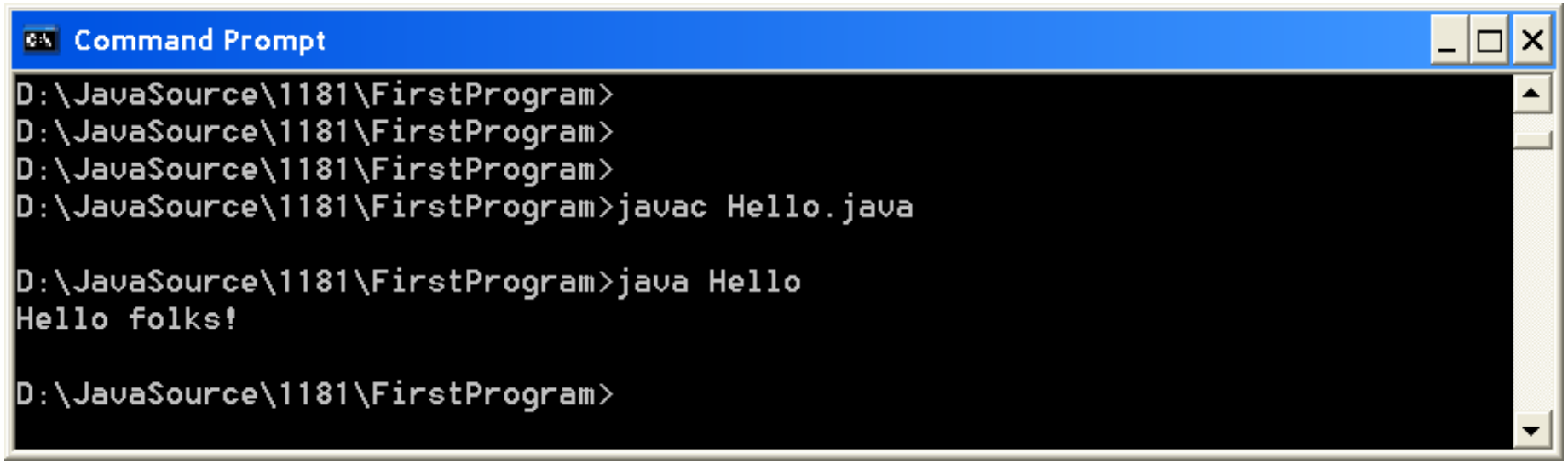
- Compiler: a program which translates one programming language into another.

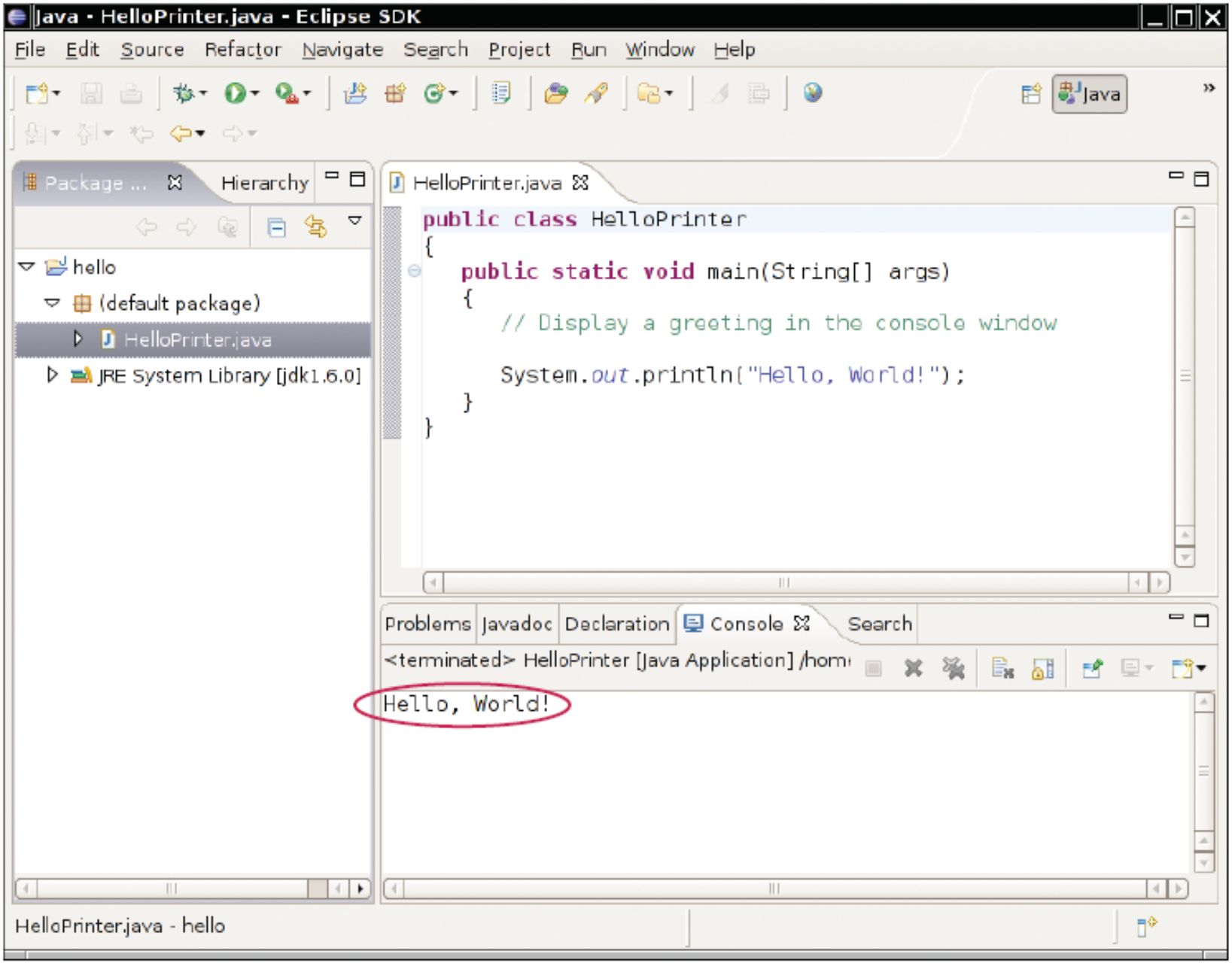
- Interpreter: a program that directly executes, i.e. performs, instructions written in a programming or scripting language, without previously compiling them into a machine language program. -wiki

- Java Virtual Machine (JVM)
  - A hypothetical computer that runs Java
  - Each java runtime environment simulates/implements this machine
- Just-In-Time Compilation (JIT)
  - Rather than being interpreted, the Java bytcode (for the simulated machine) is compiled for the native machine.


Java Source Code
javac
Java Compiler
.class files
java
Java Virtual Machine
Java Interpreter
Computer Operating System


Editor
Source File
Compiler
Class files
Library files
Virtual Machine
Running Program


Command Prompt
D:\JavaSource\1181\FirstProgram>
D:\JavaSource\1181\FirstProgram>
D:\JavaSource\1181\FirstProgram>
D:\JavaSource\1181\FirstProgram>javac Hello.java
D:\JavaSource\1181\FirstProgram>java Hello
Hello folks!
D:\JavaSource\1181\FirstProgram>


Java - HelloPrinter.java - Eclipse SDK
File Edit Source Refactor Navigate Search Project Run Window Help
Java
Package ... Hierarchy
hello
(default package)
HelloPrinter.java
JRE System Library [jdk1.6.0]
HelloPrinter.java
public class HelloPrinter
{
public static void main(String[] args)
{
// Display a greeting in the console window
System.out.println("Hello, World!");
}
}
Problems Javadoc Declaration Console Search
<terminated> HelloPrinter [Java Application] /hom
Hello, World!
HelloPrinter.java - hello

Errors

- Syntax / Compiler Errors
  - Errors that are caught at compilation time
- Run-time or Logic Errors
  - Program compiles, but has a *failure* at runtime.

- Console applications
  - support character output to a computer screen in a command window

- Windowed applications
  - create a graphical user interface (GUI)