McMaster University
Department of Computing and Software
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SE 3E03, Fall 2002
Assignment 2

Design and Selection of Programming Languages

5th September 2002

Your First Cup of **Java**

Problem 7 (First Cup of Java)

Follow the Java tutorial at the following web site:

URL: http://java.sun.com/docs/books/tutorial/

On the department's SUN computers, the JDK is installed, and you should start with completing the "Your First Cup of Java" trail. (If you haven't been using Emacs or XEmacs as your editor so far, this is a good opportunity to get started.)

Then, follow the whole "Getting Started" trail and complete the exercises on your own before proceeding to the answers page. While reading the "The Java Phenomenon" lesson, make notes of any critical questions that you would like to ask.

Finally, from the trail "Learning the Java Language", follow the "Language Basics" lesson, and again complete all the exercises.

Problem 8 (Java versus Oberon and C)

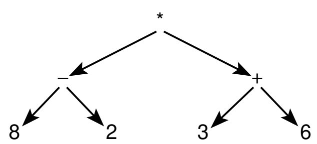
Identify differences between Java, Oberon-2, and C as you notice them.

In particular, try to find out where just the terminology is different, and where the concepts or restrictions are different.

Enter your observations into the table on the next page, and also complete the given entries. As last resort, you may refer to the Java 2 Language Specification — there are pointers on the course page.

Problem 9 (Data Stuctures Review)

Aritmetic expressions can be understood as tree structures; the tree corresponding to $(8 - 2) + (3 * 6)$ is



a) Provide Oberon-2 data type definitions for such arithmetic expression trees.

b) Provide an Oberon-2 function definition for an evaluation function for such arithmetic expression trees.

Remember your Software Engineering principles!

(Concept/Feature)	**Oberon-2**	**Java**	**C**
Variable names			
Class names			
Numeric literals			
Character literals			
String literals			