

**COS 301 Programming Languages**  
**Fall 2009**  
**Project Assignment #1 Due Thursday Sept 24**

**Overview and History**

All of you know either Java or C++ fairly well. For the remainder of the semester you will use whichever of the two is more familiar to you as a language for comparison and contrast with your project language.

Write a paper 5 to 8 pages in length that addresses the following topics:

- a brief overview of your language
- a brief history of the language
- a brief discussion of the differences and similarities between your language and Java or C++

Some points that might be covered in the above topics are when and where the language originated, major influences on the language, the purpose of the language, main features, unusual features, strengths and weaknesses, acceptance by the software community, future prospects (if any) or reasons for the lack of future prospects.

Start developing a separate annotated bibliography of your references. An annotated bibliography provides both the standard bibliography reference and a short description of why this reference is useful.

For citations and bibliography we will use the IEEE citation style. The relevant section of the IEEE manual can be found here:

<http://www.computer.org/portal/pages/ieeecs/publications/author/style/refer.html>

A couple of web pages that provide some good examples are the Monash University Library

<http://www.lib.monash.edu.au/tutorials/citing/ieee.html>

and the University of Toronto Engineering Communication Centre

<http://www.ecf.utoronto.ca/~writing/handbook-docum1b.html>

**Programming Assignment #1**

Write a program in your selected language that interactively obtains two numbers  $x$  and  $y$ , and computes and displays the sum, difference, product and quotient (i.e.,  $x+y$ ,  $x-y$ ,  $x*y$ ,  $x/y$ ). You do NOT need to be concerned with determining whether input is correct; you can assume that it is. Some languages may not be well suited to interactive input and the assignment may be modified for non-interactive input if necessary. The numbers may be integers or other types.

If you are working with a web scripting language you can use HTML for input. An example form is given below.

An amusing and interesting website for programming languages is the 99 Bottles of Beer site at <http://www.99-bottles-of-beer.net/> For popular languages you can usually find at least half-a-dozen different programs varying widely in style

**Remember that the paper page count does not include the front matter (title page, abstract and TOC) or end matter (bibliography and/or appendices).**

## Example HTML Page for Web Scripting Languages

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title>COS 301 Fall 2009 Project 1</title>
</head>
<body>
<h1>COS 301 Fall 2009 Project 1</h1>
<form id="form1" name="form1" method="get" action="">
<p>Enter values for x and y:</p>
<p>
x:&nbsp;<input type="text" id="textx" name="textx"
  style="text-align: right;" /><br />
y:&nbsp;<input type="text" id="texty" name="textx"
  style="text-align: right;" /><br />
<input type="submit" value="Submit" name="submit" id="submit" />
</p>
</form>
</body>
</html>
```