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**COS 301 Programming Languages**  
**Fall 2012**  
**Project Assignment #1 Due Thursday Sept 27**  
**Overview and History**

Write a paper 8 to 10 pages in length that addresses the following topics for your project language:

- a brief overview of the language
- a brief history of the language

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. Remember to support your opinions and statements with logical arguments and citations of other authors.

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.ieee.org/documents/ieeecitationref.pdf>

See the course website <http://umcs.maine.edu/~cmeadow/courses/cos301/index.html> for some useful examples of citations.

**Programming Assignment #1**

Write a program in your selected language that interactively obtains two floating point numbers  $x$  and  $y$ , and computes and displays integer and fractional parts of each number, and the sum, difference, product and quotient ( $x+y$ ,  $x-y$ ,  $x*y$ ,  $x/y$ ). Also test division by zero to find out how your language handles it.

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.

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).**

**Remember to review the paper format checklist before submitting!**

## 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>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <title>COS 301 Fall 2012 Project 1</title>
</head>
<body>
<h1>COS 301 Fall 2012 Project 1</h1>
<form id="form1" name="form1" method="get" action="">
<p>
Enter x:&nbsp;
<input type="text" id="textx" name="textx" style="text-align: right;" /><br />
Enter y:&nbsp;
<input type="text" id="texty" name="texty" style="text-align: right;" /><br />
<input type="submit" value="Submit" name="submit" id="submit" />
</p>
</form>
</body>
</html>
```