CMPE 230 Systems Programming
Homework 2 (due May 9th)
(This project can be done in groups of at most 2 students)

In this project, you will implement an A86 assembly language program that will input postfix expression involving hexadecimal quantities and evaluate it. After evaluation, the result should be output. Here are some example inputs to the program and the outputs generated:

input	output
2 3 + 4 5 + * 2 /	0016
A B C + 2 + *	00FA
1 2 4 + + FFFF ^	FFF8

The following operations will be supported.

operation symbol	meaning
+	addition
*	multiplication
/	integer division
^	bitwise xor
&	bitwise and
|	bitwise or

You can make the following assumptions:

- The input tokens are separated by a blank character.
- The postfix expression given is syntactically correct.
- All values and results of operations will be 16 bit values.

Grading
Your project will be graded according to the following criteria:

Documentation (written document describing how you implemented your project)	12%
Comments in your code	8%
Implementation and tests	80%

Testing

Your code will be graded automatically in the virtual machine you can find here. Specifically, we will execute the following commands to check the output of your program.

Step	Command	Explanation
1	`a86 postfix_evaluator.asm`	Compiles your code and produces the executable
2	`postfix_evaluator`	Runs the executable which takes postfix expression and outputs its result

You can also use the debugger with the following command: `d86 postfix_evaluator`

Late Submission

If the project is submitted late, the following penalties will be applied:

- 0 < hours late <= 24 : 25%
- 24 < hours late <= 48 : 50%
- hours late > 48 : 100%