

## COSC 311 Programming Project #3

FALL 2015

**Distributed:** 11/2/2015

**Due:** 11/11/2015 (1-1/2 week)

**Precis:** Implement stack-based evaluation of postfix arithmetic expressions (Drozdek pp 171 – 176)

For the binary operators:

*	multiply
/	integer divide
+	add
-	subtract
^	exponentiate
%	mod
m	min
M	max

Complete the implementation of the stack-based evaluation of postfix integer arithmetic expressions on integer values.

Precedence from high to low:

M, m
^
*, /, %
+, -

All operators are left associative.

**Catch the following errors by throwing exceptions:**

- Operator without operands
- Single operand
- Extra operand
- Variable name
- Empty string

**Test cases:**

3	4	/				
3	4	+	5	6	-	*
3	4	m	2	M		
2	3	4	5	M	*	+
117	10	%	3	%		
1	2	-	3	-	4	+
2	3	M	2	3	m	^

Turn in screen shot showing your program executing on the test cases and catching the errors indicated above.

**Turn in:**

Hardcopy of code  
Screen shot

**Grade based on:**

Meeting specifications  
Elegance  
Readability