***Assembly Language 2014***

***Assignment #1***

***General notes:***

1. Assignment deadline is Thursday 27th November 2014 11:59 PM.
2. Make a separate .asm file for each problem.
3. Make sure your code is running, we **won’t fix** any syntax errors.

Problems (Chapter 5: Programming Exercises):

1. **Draw Text Colors**

Write a program that displays the same string in four different colors, using a loop. Call the **SetTextColor** procedure from the book’s link library. Any colors may be chosen, but you may find it easiest to change the foreground color.

1. **BetterRandomRange Procedure**

The RandomRange procedure from the Irvine32 library generates a pseudorandom integer between 0 and *N-*1. Your task is to create an improved version that generates an integer between *M* and *N-*1. Let the caller pass *M* in EBX and *N* in EAX. If we call the procedure *BetterRandomRange*, the following code is a sample test:  
mov ebx,-300 ; lower bound  
mov eax,100 ; upper bound  
call BetterRandomRange

Write a short test program that calls BetterRandomRange from a loop that repeats 50 times. Display each randomly generated value.

1. **Random Strings**

Write a program that generates and displays 20 random strings, each consisting of 10 capital  
letters {A..Z}.

1. **Summation Program**

Modify the Summation program in Section 5.6.1 as follows: Select an array size using a constant:  
ARRAY\_SIZE = 20  
array DWORD ARRAY\_SIZE DUP(?)  
Write a new procedure that prompts the user for the number of integers to be processed. Pass the same value to the PromptForIntegers procedure. For example,

How many integers will be added? 5