

Palindrome, Word, Character and Bit Count

***Objectives:** To write an x86-32 Assembly Language to perform Palindrome and count the number of characters, words and bits for the given input.

***Deadline:** October 31, 2015 (Saturday) via Google classroom

***Filename:** surname [1st 7 characters surname (max) + 1st character given name].asm (example:uyr.asm)

Specifications:

- Clear Screen.
- Input: String of characters (maximum of 40 characters)
- Error checking: null input, max input, invalid terminator
- Output #1: Output the palindrome of the given string if the terminator is “!” Output the string “as is” if the terminator is “.” If the terminator is neither a “!” or “.” it is considered as an invalid terminator. Note that terminator is NOT part of the output.
- Output #2: Output the number of words of the given string
- Output #3: Output the number of characters of the given string (exclude terminator)
- Output #4: Output the number of **bit having a value of 1** in the given string (exclude terminator). Example: “A” is represented internally as 0100 0011, thus the number of bit have a value of 1 is 3.
- Prompt the user whether the program will be executed again.
- See the example below for the output.

***** Sample Run*****

```
Enter string: ABC DEF!
Palindrome: FED CBA
Word: 2
Character: 7
Bit-1 : 16

Enter string: ABC DEF.
Palindrome: ABC DEF
Word: 2
Character: 7
Bit-1: 16

Enter string: Hello Sir?
Error: invalid terminator, please try again
```

Rubrics:

1.) Clear Screen	01 pt.	
2.) Enter string	02 pts.	
3.) Check for error, with appropriate error message	05 pts.	
4.) Output Palindrome “!”	10 pts.	
5.) Output Normal “.”	05 pts.	
5.) Output word count	10 pts	
6.) Output character count	05 pts	
7.) Output bit count	10 pts	
7.) Do you want to continue?	02 pts.	
	50 pts.	