Project 2

Comp 122/L Spring 2019

Write a program in ARM using ARMSim# to perform the following tasks:

* Open a file named "input.txt" for input.
* Read text from the file as a string of characters.
* Uppercase the first letter of every word.
* Replace all punctuation and symbols with an asterisk (\*).
* Do not modify blank spaces.
* Output the new string from memory to a file called "output.txt."
* Finally, display a message on STDOUT indicating that the modified text string has been written to the output file (“**Input string has been modified and saved in the output file.**”).

For example:

If the "input.txt" file contains “**You must not lose faith in humanity. Humanity is an ocean; if a few drops of the ocean are dirty, the ocean does not become dirty.”**

The "output.txt" file should contain “**You Must Not Lose Faith In Humanity\* Humanity Is An Ocean\* If A Few Drops Of The Ocean Are Dirty\* The Ocean Does Not Become Dirty\*”**

Meeting the above requirements is a bare minimum for the assignment or 75%. In order to get full (maximum) credit, your program should:

1. Have appropriate comments in the source code. Think about explaining as if someone else is reading your code and trying to understand your approach.
2. You must cover these tests at the minimum:
   1. Reading wrong file name (error message)
   2. Reading an empty file (message)
   3. Writing an empty file (message)

Please submit the following:

1. Project2.s
2. Screenshots of your ARMSim and output display that show the output of the program running
3. Output.txt (showing the result)

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| **Decimal Values** | **ASCII Characters** | **Action** |
| **00 - 31** | **Non-Printable** | **Ignore** |
| **32** | **SPACE** | **No Change - Next Word Follows** |
| **33 - 47** | **Special Printable** | **Replace with “\*“** |
| **48 - 57** | **0 - 9** | **No Change** |
| **58 - 64** | **Special Printable** | **Replace with “\*“** |
| **65 - 90** | **A - Z** | **No Change** |
| **91 - 96** | **Special Printable** | **Replace with “\*“** |
| **97 - 122** | **a - z** | **Capitalize if it is the First Character of the Word** |
| **123 - 126** | **Special Printable** | **Replace with “\*“** |
| **127** | **Non-Printable DEL** | **Ignore** |