Description

For the lab assignment, you need to implement a program takes pre-defined test data and uses that data to test several functions. The functions you will write are essentially string versions of some of Standard C Library's character functions.

The main() function in your program should:

- Test whether the string ALPHATEST1 is indeed all alphabetic or not.
- Test whether each of the strings UPPERTEST1 and UPPERTEST2 are all upper case or not. If string is upper case, the program should print a message to that effect. If not, the program should convert the string to upper case and print the newly upper-cased string.

Test Strings

#define ALPHATEST1 "abcd67890efghijk123z"

#define UPPERTEST1 "AbCDefghijKLMNOpqrSTUVwxyZ"

#define UPPERTEST2 "ABCDEFGHIJKLMNOPQRSTUVWXYZ"



Functions You Must Write

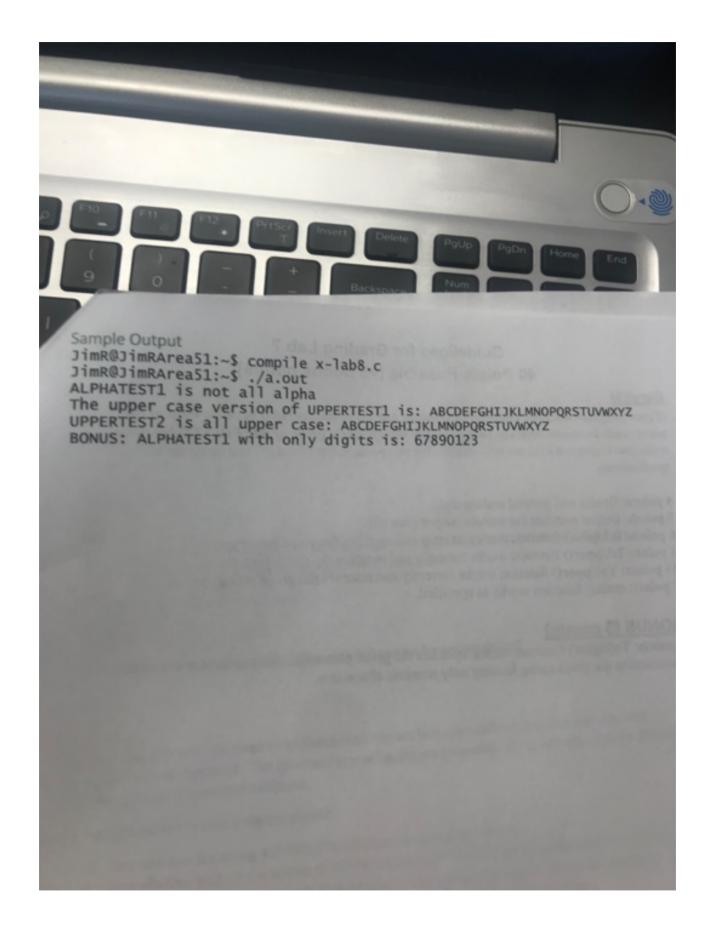
You may write any functions you wish to implement this program, in addition to the following functions, and they must be prototyped as shown:

- int IsAlpha(char * s) This function returns 1 if all of the characters in the string s are alph characters. Otherwise, it returns 0.
- int IsLower(char * s) This function returns 1 if all of the characters in the string s are upp case. Otherwise, it returns 0.
- void ToLower(char * s) This function takes a string and converts it to the lowercase equi
- int main(void) You must write a main that will test the strings given as shown.

Bonus

For the optional bonus, you can write a new function that removes all non-numeric characters fro string defined as ALPHATEST1. If you implement the bonus, you must print the version of ALPHAT that your function produced and that now has only numeric characters in it. The prototype for the function should be:

 void ToDigits(char * s) – This function modifies the given string so that all of the non-num characters in it are removed.



Guidelines for Grading Lab 7 40 Points Possible (+5 bonus points)

General

If your program does not compile, or produce any input/output (I/O) because most of the source code is commented out then your lab will receive a grade of NO POINTS. For partial credit your C program must not only compile but also produce some valid I/O that meets the lab specifications.

5 points: Header and general coding style.

5 points: Output matches the sample output correctly.

6 points: IsAlpha() function work correctly and matches the given prototype.

6 points: IsUpper() function works correctly and matches the given prototype.

13 points: ToUpper() function works correctly and matches the given prototype.

5 points: main() function works as specified.

BONUS (5 points)

5 points: ToDigits() function works, matches the given prototype, and removes non-numeric characters in the given string leaving only numeric characters.