Quiz 5

Due 11:59 PM Friday March 12

Quiz 5

Implement a program with lex and C that recognizes the token types identifier, integer, float and string. An identifier is a sequence of one or more alphabetic characters (upper or lower case). An integer is a sequence of 1 or more digits. A float is a sequence of one or more digits followed by a period (or decimal point) followed by a sequence of 1 or more digits. A string is a double quote (") followed by a sequence of zero or more alphabetic characters (upper or lower case) followed by a double quote. The program must use the symbol table to store each token, the type of the token and the number of times the token appeared in the file. The input file can contain any character. If a character other than a blank, newline, carriage return, tab, digit or alphabetic character is found the phrase "Illegal Character: " should be printed to stdout following by the unexpected character.

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The input to the program will come from stdin (DO NOT USE IOMngr). When all the input has been processed the program should print each token found, its data type and the number of times the token appeared in the file to stdout. For example if the input is

```
x  72  83  sue 9
73 max   AEF zelda 83 "abc"
zzz   2291 max 42 x 83 72 83
zelda  9 max zelda 73
"def" "abc" "abc"
7E3
*
```

The output should be

Illegal Character: *

Token	Type	Count
3	Integer	1
42	Integer	1
AEF	Identifier	1
E	Identifier	1
zelda	Identifier	3
x	Identifier	2
2291	Integer	1
max	Identifier	3
72	Integer	2
7	Integer	1
73	Integer	2
"abc"	String	3
83	Integer	4
9	Integer	2
zzz	Identifier	1
sue	Identifier	1
"def"	String	1

Quiz 5 Submission

- Upload one zip file to Canvas. The zip file **must contain only one file called q5.l.** Put all your C code in the file q5.l. Do not include your SymTab implementation in the zip file. I will use my own SymTab when I test your program.