Laboratory Exercise #11

Reading

- Read Section 5.2 of Paul Carter's PC Assembly Book

Practice Exercise:

- Execute “memory.asm” and interface it with “memex.c”.

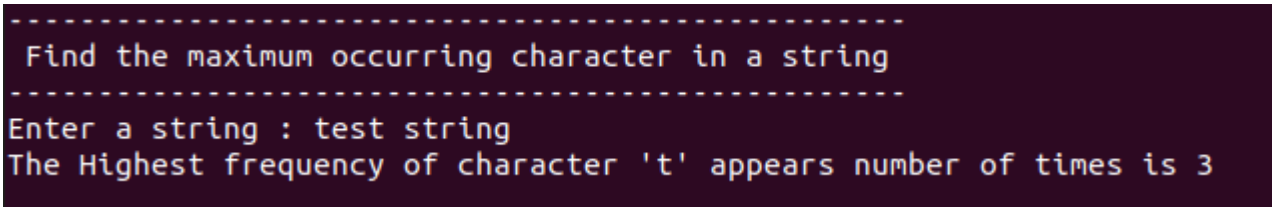
```
almie@almie-Inspiron-5570:~/Documents/ASSEMBLY/linux-ex$ nasm -f elf memory.asm
almie@almie-Inspiron-5570:~/Documents/ASSEMBLY/linux-ex$ gcc -m32 -o memory memex.c memory.o asm_io.o
almie@almie-Inspiron-5570:~/Documents/ASSEMBLY/linux-ex$ ./memory
test string
Enter a char: test
Found it: test string
Enter string:t
len = 1
t
almie@almie-Inspiron-5570:~/Documents/ASSEMBLY/linux-ex$ ./memory
test string
Enter a char: str
Found it: st string
Enter string:str
len = 3
str
almie@almie-Inspiron-5570:~/Documents/ASSEMBLY/linux-ex$ ./memory
test string
Enter a char: e
Found it: est string
Enter string:ring
len = 4
ring
almie@almie-Inspiron-5570:~/Documents/ASSEMBLY/linux-ex$ ./memory
test string
Enter a char: f
Not found
Enter string:ing
len = 3
ing
```

- Analyze the sample codes (memory.asm and memex.c). Reflective questions:

```
   What does memory.asm do? What does memex.c do? How does string
being implemented in assembly?
```

Problem #11.

- Write an assembly program to find maximum occurring character in a string.
- The output of your program is something like this:



- A good programming practice is to write comments on important line of codes for readability and documentation.

Note: Take a screen record of your working code and make sure to record a video explaining each line of your code as well as showing the correct output of your code. Use screen recorder application in Ubuntu (https://itsfoss.com/best-linux-screen-recorders/) or Windows (https://atomisystems.com/screencasting/record-screen-windows-10/)

Deadline :_____

Rubric for Programming Exercises				
Program (50 pts)	**Excellent**	**Good**	**Fair**	**Poor**
Program Execution	Program executes correctly with no syntax or runtime errors (9-10)	Program executes with minor (easily fixed) error (4-8)	Program executes with a major (not easily fixed) error (2-3)	Program does not execute (0-1)
Correct Output	Program displays correct output with no errors (9-10)	Output has minor errors (6-8)	Output has multiple errors (3-5)	Output is incorrect (0-2)
Design of Output	Program displays more than expected (7-8)	Program displays minimally expected output (5-6)	Program does not display the required output (3-4)	Output is poorly designed (0-2)

Design of Logic	Program is logically well-designed (9-10)	Program has slight logic errors that do not significantly affect the results (6-8)	Program has significant logic errors (3-5)	Program is incorrect (0-2)
Standards	Program is stylistically well designed (6-7)	Few inappropriate design choices (i.e., poor variable names, improper indentation) (4-5)	Several inappropriate design choices (i.e., poor variable names, improper indentation) (2-3)	Program is poorly written (0-1)
Documentation	Program is well-documented (5)	Missing one required comment (4)	Missing two or more required comments (2-3)	Most or all documentation missing (0-1)