Lab Assignment 4

1. Write the assembly language code for printing the statement "*Hello, World*".

```
# PROGRAM: Hello, World!
        .data                # Begin a data declaration section
msg:    .asciiz   "\nHello, World!\n"

        .text                # Begin a section of assembly language instructions
main:                        # Execution begins with next instruction

        li    $v0, 4         # system call code for printing string = 4
        la    $a0, msg       # load address of string to be printed into $a0
        syscall              # call operating system to perform operation in $v0
                             #    syscall takes its argument from $a0
        li    $v0, 10        # system call code for terminating execution
        syscall
```

2. Write the assembly language code for performing addition of two integer number.

```
.data
sum:       .asciiz   "\nSum: "

.text
li          $t0       15
li          $t1       12
add $t2, $t1, $t0
li          $v0,      4
la          $a0, sum
syscall
li $v0, 1
la $a0, ($t2)
syscall
li          $v0,      10
syscall
```

3. Convert following line of code into assembly instructions.

   C code: a = b + c - d;
                 a = a+5;
                 e = a*3

   assume the value of b = 10; c= 5; and d = 2;