COSC211 Lab 4 Written

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Question 1

a)

```
#code section
    .text               # directive for code section
    .globl main         # directive: main is visible to other files
main:
    # int my_global = 100;
    li $t0, 100
    sw $t0, my_global($gp)

    # int z;
    # save $s0 for z

    # my_global += 1
    lw $t0, my_global($gp)
    addi $t0, $t0, 1
    sw $t0, my_global($gp)

    # int x;
    # save $s1 for x

    # z = leaf_function(x = 0);
    li $s1, 0
    add $a0, $s1, $zero
    jal leaf_function
    add $s0, $v0, $zero

    # exiting
    li $v0, 10
    syscall

leaf_function:
```

```
        addi $v0, $a0, 1
        jr $ra


#-------------------------------------------------------------------
#data section
     .data   #directive for
my_global:
        .space 4
```

Question 2

a)

h	e	l	l	o		w	o	r	l	d
0x68	0x65	0x6c	0x6c	0x6f	0x20	0x77	0x6f	0x72	0x6c	0x64

b)

0	1	2	3	4	5	6	7	8	9
0x30	0x31	0x32	0x33	0x34	0x35	0x36	0x37	0x38	0x39