CSE 331L: Microprocessor Interfacing & Embedded System Lab

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EEE 332/ CSE 331

Lab-4

Topic: Jump, Practice-1

Topics to be covered in class today:

- Conditional Jumps
- Procedures
- Instructions:
  - ➤ CMP = Compare
  - ➤ Jg = jump when greater than
  - ➤ Jge = jump when greater than or equal to
  - ➤ Jl = jump when less than
  - ➤ Jle = jump when less than or equal to

Example:
Find if 3 > 5 or not. If 3 > 5 then print "3 is greater than 5" otherwise print "5 is greater than 3"

ASM Code:

```
org 100h

mov al,a
mov bl,b
cmp al,bl
jg print

mov ah,9
mov dx,offset msg1
int 21h
jmp finish
```

```
print:
    mov ah,9
    mov dx,offset msg2
    int 21h
    jmp finish

finish:

ret

a db 3
b db 5
msg1 db "5 is greater than 3 $"
msg2 db 10,13, "3 is greater than 5 $"
```

1. **Now try to solve the above example problem using jl (jump when less than) / jle (jump when less than or equal to).**

2. **Take 3 values of an array from the user and find the lowest value among them.**

3. **Write an ASM code to read a letter and print if it is Upper case or Lower case**

4. **Write an ASM code to read a letter in Upper case and print it after converting it to lower case.**

5. **Write an ASM code to test if a number is even or odd (from 0-9)**