

CS221 Assembly Language

Lab1

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1- Practice:

Data declaration:

use the given program template to declare the variety of data declaration we studied in lecture 2.

```
TITLE Flat Memory Program Template    (Template.asm)

; Program Description:
; Author:                      Creation Date:
; Modified by:                  Modification Date:

.686
.MODEL FLAT, STDCALL
.STACK

INCLUDE Irvine32.inc
.DATA
    ; (insert variables here)
.CODE
main PROC
    ; (insert executable instructions here)
    exit
main ENDP
    ; (insert additional procedures here)
END main
```

Use you slides to:

A- declare a byte with different forms

B- declare a word in different forms

C- declare dword

D- declare a string

Exercise:

use these data declarations to:

E- print a string:

to print a string you should declare this string (buffer) as byte, and add in the code the following two lines: 1) put the address of the string in the register edx and then 2) call the macro WriteString

```
mov  edx,OFFSET buffer    ; display the buffer  
call WriteString
```

F- initialize (mov) a register (say eax) with the value 0F1E2D3C

G- initialize the registers ebx and ecx to 0

H- move the content of the register ax to bx

I- move ah to cl and al to ch

J- show the registers by calling DumpRegs

2- Quiz:

A Quiz will be given.