

## **EE 354**

### **Assembly Program Format**

Assembly language programs for the 8051 should be turned in using the following format:

```
; Your Name
; Assignment number
; Date
;
; Header describing what program does
;
P4 EQU 0C0h ;P0 to P3 are already defined
;List all segment names here. For example
Main SEGMENT CODE
More SEGMENT CODE
Less SEGMENT DATA
;
RSEG Main ;Declare segment
;Put main program here
    ...
    ...
    Last: sjmp Last ;effective halt at end of main
;
RSEG More ;Declare relative segment
    ...
    Code for this segment
    ...
Put any additional segments here

END ;Final directive indicating end
; of all code
```

A complete example is given on the following page.

Revised: August 27, 2010

```
;Joe Student
;Assn 0
;August 27, 2010
;
;AT89C51Test.A51
; This program counts up on Ports 0, 1, 2, and 3 and toggles P4.0
; so that P2 goes to the D to A converter. The D to A converter
; will have a ramp function on it and all the other ports will
; count up forever.
P4 EQU 0C0h
MAIN SEGMENT CODE
CSEG at 0000h
    LJMP Start
;
RSEG MAIN
Start: inc P0      ;increment port 0 to port 3
      inc P1
      inc P2      ; port 2 is D to A port
      inc P3
      setb P4.0   ; trigger write to D to A
      clr P4.0
      setb p4.0
      sjmp Start  ; loop forever
END
```