** EE3170—Solution: Homework 3  
Due 9:00am, Wednesday (October 13th) in class  

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**Notes:** HW 3 has a total of 10 points, and questions 3.8 and 3.21 are selected to grade. Therefore, the correctness of questions 3.8 and 3.21 is weighted 5 points (2.5 points each), and the completeness of the rest of questions is weighted to another 5 points. Below is the solution of HW3.  
(3.1; 3.6; 3.8; 3.9; 3.21; 3.22)  

3.1  
Among other options, ldd #3041 works.  

3.6  
The double-byte number at $0010$ is $1277$.  

3.8  
Immediate addressing mode; $1000$  

3.9  

```assembly  
** Assembler Exercise  
*  
3 16(a) const equ 22  
4 0015 org $0015(b)  
5 0015 save(c) rmb 1  
6 0016 temp rmb 1  
7 0017 33 value fcb %00110011(d)  
8 C123 org $C123  
9 C123 03 here fcb 3  
10 C124 rmb 1  
11  
12 C000 org $C000  
13 C000 D617 (e) start ldab value  
14 C002 17 tba(f)  
15 C003 8B16 (g) adda #const  
16 C005 9715 (h) staa save  
17 C007 CEC123 (i) ldx #here  
18 C00A E701 stab 1,X(j)  
19 C00C 2705 again beq next(k)  
20 C00E 5C incb  
21 C00F 6A01(l) dec i,X  
22 C011 20F9(m) bra again  
23 C013 D716 next stab temp  
```  

3.21
One solution could be:

```
START       CMPB     #-6
BLT         NEXT
CMPB        #4
BGT         NEXT
CLRB
NEXT        SWI/STOP
END
```

3.22
One version might look like this:

```
....
TAB
LDAA       #$FF
TSTB
BMI        NEXT
CLRA
NEXT ....
```