Module 9  
Due the next class meeting after Module 9 is done in class.

1. Software pipeline your Word-Wide optimized code from Module 8. Show your dependency graph, scheduling table and final code including the prolog and epilog.

   MVK .S1 40, A2 ; A2 = 40, loop count

   loop: LDH .D1 *A5++, A0 ; A0 = a(n)
   LDH .D1 *A6++, A1 ; A1 = x(n)
   MPY .M1 A0, A1, A3 ; A3 = a(n) * x(n)
   ADD .L1 A3, A4, A4 ; Y = Y + A3
   SUB .L1 A2, 1, A2 ; decrement loop count
   [A2] B .S1 loop ; if A2 ≠ 0, branch
   STH .D1 A4, *A7 ; *A7 = Y

2. How many cycles does the software pipelined code take?