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ENEE 350 Homework Set 7
 Programming Assignment 2
 (Due: Class 25, Mon., Mar. 31, 2008)

Write, assemble and run successfully on the simulator a Mac-1 subroutine **maxm(n,x)** that returns in the AC the address of the integer possessing the largest absolute value (i.e., magnitude) among the n integers in the array whose starting address is x. Your subroutine should be tested with the main program shown below, which defines how the parameters are passed.

<pre> /main program EXTRN maxm ans1 RES 1 ans2 RES 1 ans3 RES 1 n1 7 n2 10 n3 6 start loco 4020 swap /initialize sp loco n1 push /push address n1 loco data push /push array start address one call maxm stod ans1 insp 2 loco n2 /push address n2 push loco data addd (4) push /push array start address two call maxm stod ans2 insp 2 loco n3 /push address n3 push loco data addd (6) push /push array start address three call maxm stod ans3 insp 2 halt /data array continues here but / is shown in the above right hand column </pre>	<pre> /continued from below halt data 57 0 129 8 -134 3 -2 -29 -3 347 15 -6 -435 13 END start </pre>
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Hand in a copy of the main program symbolic assembly listing, the subroutine symbolic assembly listing, the contents of (macro) memory after “load main sub” (i.e., of main.abs) before execution of the program, and the contents of memory after execution of the program. Highlight and comment upon the final answers. Specify what values are contained in the addresses specified by ans1, ans2, and ans3.