星期一（4/8）各隊報告事項：

Please write an ERA program to do the following items.

1. Choose a set of acceleration pulse response from your mass-spring system.
2. Form a Hankel matrix H = H(0) U H(1) of any desired size but must be larger than 20 by 100.
3. Choose H(0) to be the first column to the last second column of H, and H(1) from the second column to the last column of H.
4. Compute the singular decomposition (SVD) of H(0) to identify the input matrix B and the output matrix C.
5. Identify the state matrix A from the SVD of H(0), and H(1).
6. Verify system matrices A, B, C, and D by comparing the system Markov parameters with the pulse response. Take the vector norm of pulse response minus system Markov parameters.
7. Repeat steps 2 to 6 with the displacement and velocity measurements from the same mass-spring system.
8. Repeat steps 2 to 6 with the real data from your project if available.