星期一（3/25）各隊報告事項：

Please assign your own mass m and spring constant k such that the frequency of the system, i.e., squared root of k/m is the desired one for your project. Please select the time interval such that the system frequency is 75% of the Nyquest frequency.

1. Compute three sets of pulse response (2048 data points each) with displacement, velocity, and acceleration measurements.
2. Plot amplitude and phase of the discrete Fourier transform for each of the three pulse responses.
3. Form a Hankel matrix H(0) of any desired size (see Page 9 of the lecture note era.pdf), i.e., choose alpha and beta arbitrarily, using the pulse response of the acceleration measurement. Note that the first measurement in Page 9 is defined as Y0 = D, i.e., Yk = 0,1,2,…
4. Repeat Step 3 for the other two measurements.
5. Compute singular value decomposition of each Hankel matrix for all three measurements. Plot the singular values. Note that the function for computing singular value decomposition is called svd in MATLAB.