Assignment 7

Scientific Computing with MATLAB
due: Nov 22, 2019

1. Generate a 3 second, 1000 Hz signal `y` composed of random noise (uniform distribution).
2. What is the nyquist freqency (in Hz) for your signal `y`?
3. High Pass filter
   Apply a high-pass filter the filter to your signal `y`, and plot the power spectral density before and after applying the filter using a 150 Hz cutoff.
4. Low Pass filter
   Apply a low-pass filter the filter to your signal `y`, and plot the power spectral density before and after applying the filter using a 150 Hz cutoff.
5. Band Pass filter
   Apply a band-pass filter the filter to your signal `y`, and plot the power spectral density before and after applying the filter using cutoff frequencies of 150 Hz - 350 Hz.
6. Band Stop filter
   Apply a band-stop filter the filter to your signal `y`, and plot the power spectral density before and after applying the filter using cutoff frequencies of 150 Hz - 350 Hz.

Please submit your MATLAB script to OWL.