command (i.e., "unzip audioDemo.zip") and place the extracted files in a directory in which MATLAB searches for M-files. The main program file is called `audioDemo.m`. Examine this file in some detail as it provides a basic template for doing this problem. That is, to do this problem, you will only need to comment/uncomment or make very trivial changes to various lines in this file. You should not need to change any of the code except the code in `audioDemo.m`.

(a) For the `train` audio signal, use the template program provided (in `audioDemo.m`) to plot the signal and its frequency spectrum as well as to play the signal on the audio device (i.e., speaker). Make a hardcopy of the plot of the signal and its frequency spectrum. By examining the frequency spectrum, identify at which three (nonnegative) frequencies the train whistle has the most information/energy.

(b) For the `handel` audio signal, use the template program provided (in `audioDemo.m`) to plot the signal and its frequency spectrum as well as to play the signal on the audio device. Make a hardcopy of the plot of the signal and its frequency spectrum. Then, do the same thing for the `noisyHandel` audio signal, which is essentially the `handel` signal with a significant amount of noise added for (nonnegative) frequencies in the range $[3000, 3500]$ Hz. Identify the noise on the plot of the frequency spectrum. Apply a bandstop filter with a stopband corresponding to (nonnegative) frequencies in the range $[2950, 3550]$ Hz to the noisy signal. (Note that a bandstop filter is like a bandpass filter, except that instead of passing frequencies in a certain range, frequencies in a certain range are eliminated.) Again, plot the signal spectrum and play the signal on the audio device. Describe what effect the filter had on the signal being processed. **`[filtering]`**

Note: Since the MATLAB source code is provided for this problem, it is not necessary to include a copy of this source code in your assignment submission.