load speechbad.mat

subplot(211);

plotspecDB(xxbad, fs, 4000, 80);

title('corrupted signal (xxbad)');

%sound(xxbad, 8000);

b1 = [1, -2\*cos(2\*pi\*(2222/8000)), 1];

b2 = [1, -2\*cos(2\*pi\*(1555/8000)), 1];

bb = conv(b1, b2);

yy = firfilt(bb, xxbad);

subplot(212);

plotspecDB(yy, fs, 4000, 80);

title('filtered output signal (yy)');

%sound(yy,8000);

figure

ww = -pi:(pi/100):pi; %-- omega hat frequency vector

H = freqz(bb, 1, ww); %<--freekz(bb,1,ww) is an alternative

subplot(2,1,1);

plot(ww, abs(H)), grid on

subplot(2,1,2);

plot(ww, angle(H)), grid on

xlabel('Normalized Radian Frequency')