CHEBYCHEV FILTER

PROGRAM:

Rs=50;

Rp=0.5;

Wp=0.4;

Ws=0.6;

%chebyshev1 lpf

figure(3)

[n3,Wp3]=cheb1ord(Wp,Ws,Rp,Rs)

[b3,a3]=cheby1(n3,Rp,Wp3,'low')

[h3,w3]=freqz(b3,a3);

subplot(3,1,1)

plot(abs(h3))

title('Magnitude');

subplot(3,1,2)

plot(angle(h3))

title('Angle');

y3=impulse(b3,a3,n3)

subplot(3,1,3)

stem(y3)

title('Impulse');

% chebyshev2 hpf

figure(4)

[n4,Wp4]=cheb2ord(Wp,Ws,Rp,Rs)

[b4,a4]=cheby2(n4,Rp,Wp4,'high')

[h4,w4]=freqz(b4,a4);

subplot(3,1,1)

plot(abs(h4))

title('Magnitude');

subplot(3,1,2)

plot(angle(h4))

title('Angle');

y4=impulse(b4,a4,n4)

subplot(3,1,3)

stem(y4)

title('Impulse');