CODE

clc;

close all;

clear all;

rp=input('enter the passband ripple');

rs=input('enter the stopband ripple');

fp=input('enter the passband frequency');

fs=input('enter the stopband frequency');

f=input('enter the sampling frequency');

wp=2\*pi\*fp/f;

ws=2\*pi\*fs/f;

num=-20\*log10(sqrt(rp\*rs))-13;

den=14.6\*(fs-fp)/f;

n=ceil(num/den);

n1=n+1;

if(rem(n,2)~=0)

n1=n;

n=n-1;

end

y=boxcar(n1);

y=hamming(n1);

y=hann(n1);

y=blackman(n1);

y=bartlett(n1);

b=fir1(n,wp,y);

[h,o]=freqz(b,1,256);

m=20\*log10(abs(h));

subplot(2,2,1);

plot(o/pi,m)

OUTPUT

enter the passband ripple 0.05

enter the stopband ripple 0.04

enter the passband frequency 2000

enter the stopband frequency 2500

enter the sampling frequency 15000