EEE3030 MATLAB Exercise 3

1. Use the window method in MATLAB to design an FIR low pass filter with the following specification:

Sampling frequency (fs)	10 kHz
Passband (f_p)	2 kHz
Stopband (f_s)	3 kHz
Passband ripple	< 0.1 dB
Stopband attenuation	> 60 dB

2. Verify the frequency response of the filter to check that it meets the specification.

3. Quantise the filter coefficients (hint this was done in exercise 1). By trial and error estimate how many bits of precision are required for the filter coefficients in order to meet the specification above.