Plots, DSP

```
using Plots, DSP
gr(fmt = :png)

function FIRfreqz(b::Array, w = range(0, stop=π, length=1024))
    n = length(w)
    h = Array{ComplexF32}(undef, n)
    sw = 0
    for i = 1:n
      for j = 1:length(b)
        sw += b[j]*exp(-im*w[i])^-j
      end
      h[i] = sw
      sw = 0
    end
    return h
end

fs = 20
f = digitalfilter(Lowpass(5, fs = fs), FIRWindow(hamming(61)))
w = range(0, stop=pi, length=1024)
h = FIRfreqz(f, w)

h_db = log10.(abs.(h));
ws = w/pi*(fs/2)

plot(ws, h_db,
      xlabel = "Frequency (Hz)", ylabel = "Magnitude (db)")
```