

## FIR Frequency Response Tutorial Exercise

Calculate the frequency response of the system with impulse response:

$$h(n_1, n_2) = \begin{cases} 0.125, & n_1 = \pm 1, n_2 = \pm 1 \\ 0.25, & n_1 = \pm 1, n_2 = 0 \\ 0.25, & n_1 = 0, n_2 = \pm 1 \\ 0.5, & n_1 = n_2 = 0 \\ 0, & \text{otherwise} \end{cases}$$

Is this system lowpass, bandpass or highpass?