

Digital Signal Processing – Lab 3

Consider a sample input signal S , $[3 \ 2 \ 5 \ 7 \ 9 \ 8 \ 17 \ 2]$ and an impulse response H , $[2 \ 0 \ 1 \ 4]$

1. Use the built-in MATLAB function **conv** to convolve S with H . Plot the output signal along with the original input signal and impulse response.
2. Write a custom function **InputSideConvolution** that implements convolution using the Input Side Algorithm.
3. Write another function **OutputSideConvolution** that uses the Output Side Algorithm.
4. Check that all 3 produce the exact same result.