20CYS111 – Digital Signal Processing
Assignment 2
Due Date : 20th June 2022

1. Compute the output of the discrete time-LTI system with impulse response $h(n) = \delta(n) - \delta(n-1)$ using overlap save method when the input with block size L = 3 is $x(n) = \delta(n) - 2\delta(n-1) + 3\delta(n-2) - 4\delta(n-3) + 3\delta(n-4) - 5\delta(n-5) + 6\delta(n-6) - 7\delta(n-7)$
2. Plot the magnitude spectrum of a sampled data sequence $x(t) = sin(10\pi t)$ with a sampling rate of fs=10Hz using 8 point Decimation In Time (DIT) and Decimation In Frequency (DIF) FFT algorithm