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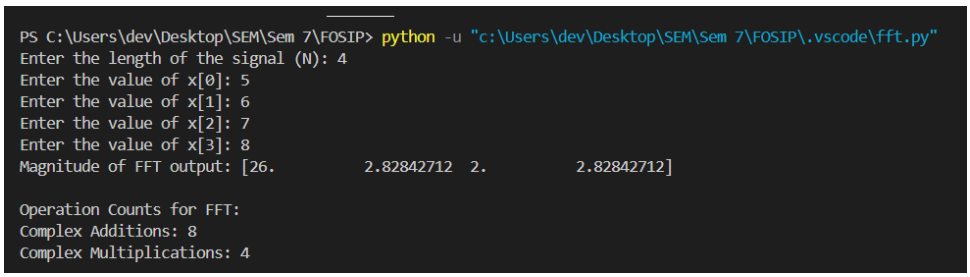
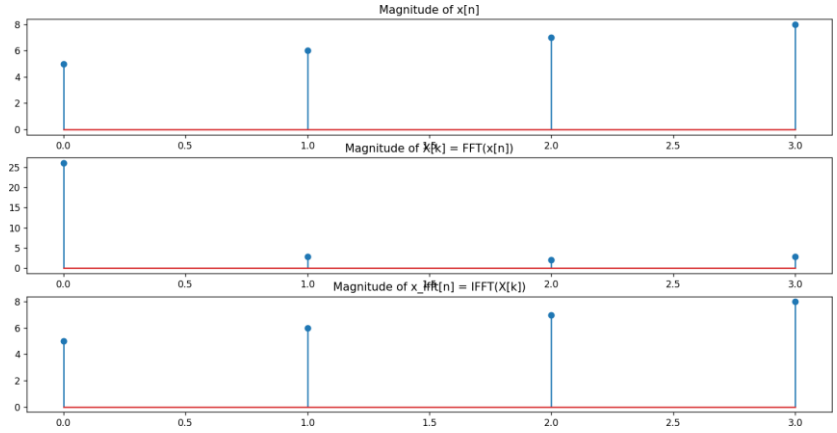
Experiment 4	
Aim:	The aim of this experiment is to implement computationally Fast Algorithms.
Objective:	1. Develop a program to perform FFT of N point Signal. 2. Calculate FFT of a given DT signal and verify the results using mathematical formula. 3. Computational efficiency of FFT.
Input Specifications:	1. Length of first Signal N 2. DT Signal values
Problem Definition:	(1) Take any four-point sequence x[n]. Find FFT of x[n] and IFFT of {X[k]}. (2) Calculate Real and Complex Additions & Multiplications involved to find X[k].
Experiment and Analysis:	 To find DFT of a 4 point sequence Input x[n]: {5, 6, 7, 8} Magnitude |X[k]| : {26, 2.82, 2, 2.82 }

	
Conclusion:	1. Computational Efficiency in DFT: a) Total Real Multiplications = 4N^^2 b) Total Real Additions = 4N^^2-2N 2. Computational Efficiency in FFT: a) Total Real Multiplications = 2N*Log2N b) Total Real Additions = 3N*Log2N 3. FFT produces fast results due to: a) Less Computations b) Parallel implementations