

Department: Electronics and Communication Engineering

DIGITAL SIGNAL PROCESSING LAB(KEC-553)

LIST OF EXPERIMENTS

(As per AKTU Syllabus)

1. Introduction to MATLAB and or Open Source Software, Scilab (Using Spoken Tutorial MOOCs).
2. Write a Program for the generation of basic signals such as unit impulse, unit step, ramp, exponential, sinusoidal and cosine.
3. Implement IIR Butterworth analog Low Pass for a 4 KHz cut off frequency.
4. Verify Blackman and Hamming windowing techniques.
5. Evaluate 4-point DFT of and IDFT of $x(n) = 1, 0 \leq n \leq 3; 0$ elsewhere.
6. Verify Linear convolution of two sequences using FFT
7. Verify Circular Convolution of two sequences using FFT.
8. To verify FFT as sample interpolator.
9. To implement Tone Generation.
10. To implement floating point arithmetic.
11. To study about DSP Processors and architecture of TMS320C6713 DSP processor.

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Software Required: MATLAB

For smooth conduction of the same lab, we have the following Equipments:

1. Computer System:- We have 40 latest computer system with high configuration in the laboratory for conducting the lab. All the computer system is installed with latest version of MATLAB software. We provide one computer system to one student to complete the his/her experiment.
2. Software:- We have latest version of MATLAB software installed in all the system and updating time to time as per requirement.
3. DSP Processor:- We have also TMS320C6713 DSP processor device in the Laboratory for understanding of students about the complete details about the DSP processor.