# DSP LAB 11

# Exploring DSP Tool Box For Analysis of Real Life Problem

## Introduction

DSP System Toolbox™ provides algorithms, apps, and scopes for designing, simulating, and analyzing signal processing systems in MATLAB® and Simulink®. You can model real-time DSP systems for communications, radar, audio, medical devices, IoT, and other applications. With DSP System Toolbox you can design and analyze FIR, IIR, multirate, multistage, and adaptive filters. You can stream signals from variables, data files, and network devices for system development and verification. The Time Scope, Spectrum Analyzer, and Logic Analyzer let you dynamically visualize and measure streaming signals. For desktop prototyping and deployment to embedded processors, including ARM® Cortex® architectures,the toolbox supports C/C++ code generation. It also supports bit-accurate fixed-point modeling and HDL code generation from filters, FFT, IFFT, and other algorithms. Algorithms are available as MATLAB functions, System objects™, and Simulink blocks.

## Task

As a group of four Students, you are required to provide a solution to any real life problem, using at least 1 DSP related tool and provide its analysis using GUI or Simulink

**Milestones**

Initial Proposal - 5th April [1-2 pages including block diagram]

Approval Status - 8th April

Report and Solution 19th April

The Rubric for the Lab will be released on LMS by 8th April