Lab Group C9
Lab: Tues, Noon
ECE 266
Due: 11/2/18

Project Proposal

For our project we are attempting to build a digital synthesizer with 3 essential components

1) Synthesizer will have the ability to output sine, triangle and square waveform patterns (selectable by the user via pushbutton)
2) 2 rotary sensors will allow control of various parameters with 3 different options (indicated by led color i.e red, green, blue and selectable via OTHER pushbutton) of waveform manipulating functions such as (volume/pitch, modulation/phase shift, echo/distortion). THIS WILL BE SCALABLE.
3) Output of these waves in their manipulated settings via speaker

Materials

For this project we will be using the following electronics as well as the tiva c and grove

- 2 rotary sensors
- buzzer (maybe use different speaker?)

Goals

1) Build on Lab 7 by writing functions to play a waveform (sine, triangle, square) and control of the frequency (maybe just create it as a single oscillator)
2) Using pushbuttons allow the user to select different modes of settings to change the input waveforms (write functions for different settings with rotary sensor as input)
3) Possibly add rangefinder as an optional theremin that could be implemented with all the previous functionalities