# Introduction

# Specification

## Level 2 Requirements

* Generate a sine wave from 0.01Hz to ?HZ with a maximum amplitude of +/- 12V.
* Generate a square wave from 0.01Hz to ?Hz with a maximum amplitude of +/- 12V.
* Generate a triangle wave from 0.01Hz to ?Hz with a maximum amplitude of +/- 12V.
* Measure the frequency of sine, square and triangle waves from 0.01Hz to ?Hz with a minimum signal of 0.1V rms.
* Control the amplitude of sine, square and triangle waves by sending control signals to a digital potentiometer, which will control the gain of the amplifier circuit.
* Create a pulse generator from ?Hz to ?Hz with a maximum amplitude of +12V.
* Measure the duty cycle for digital waveforms.
* Vary the duty cycle for digital waveforms.
* Amplitude modulate an input signal by using a sine wave to send control signals to a digital potentiometer, which will control the gain of the amplifier circuit.
* Frequency modulate an input signal by feeding it into the ADC and using the resulting values to vary the frequency of the output signal, based on a sine wave with a fixed frequency.

## Further Requirements

* Generate square waves using DDS on the AD9850 chip.
* Generate sine waves using DDS on the AD9850 chip.
* Create a random noise generator using the internal PR sequence generator.

# Software Design/Implementation

## Tasks so Far

## Tasks Still to Complete

# Hardware Design/Implementation

## Tasks so Far

## Tasks Still to Complete

# Gannt Chart