Sine Generator

DSP week 2

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# Problem

In either MatLab or CPP, create a sine generator which utilizes a complex number and its multiplication.

As an extra, can you make the frequency sweep?

# Progress

I made the assignment in MatLab, which for me was easier.

I started out with the given complex numbers from the presentation, which for a set amount of samples I multiplied. The multiplication decides how big or small the sine wave becomes.

After this, we can extract the imaginary and the real parts from the array, and plot these. This will give us our sine! A sinewave always has ONE frequency, even though it looks like it touches more than one frequency due to its shape.

To make the frequency sweep, we increase the angle which we multiply our complex number with. I chose to do this in a loop with 0.0001 increments.

# Reflection

This was a nice warming up assignment to get into Signal processing, I must say I do like MatLab more than when I started, since I really did not look forward to using it. But it turns out it is not as bad as I thought!