University of Washington
Department of Electrical Engineering
EE 341, Winter 2017

Report for Lab #1:
Working with Discrete-Time Signals

Report by:
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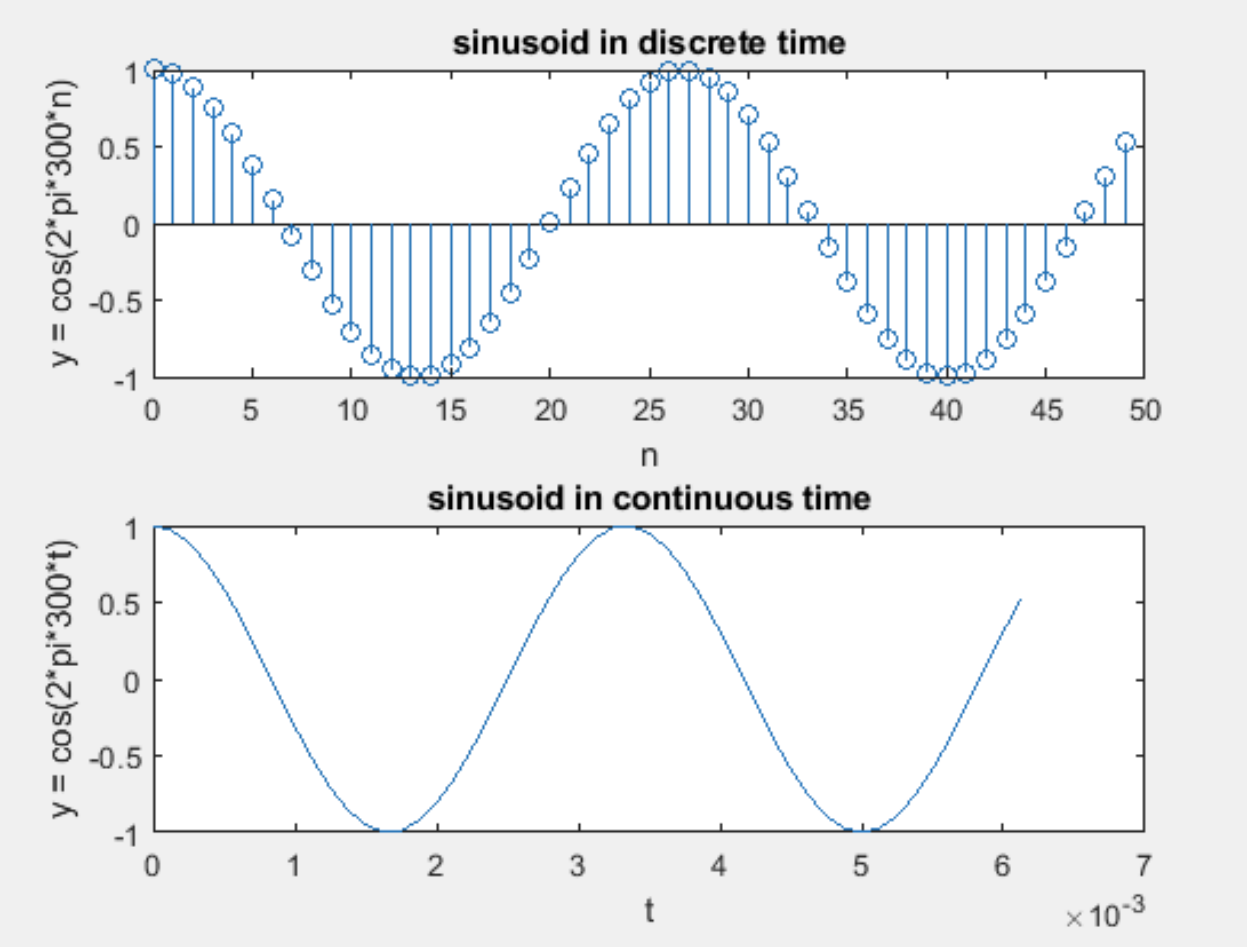
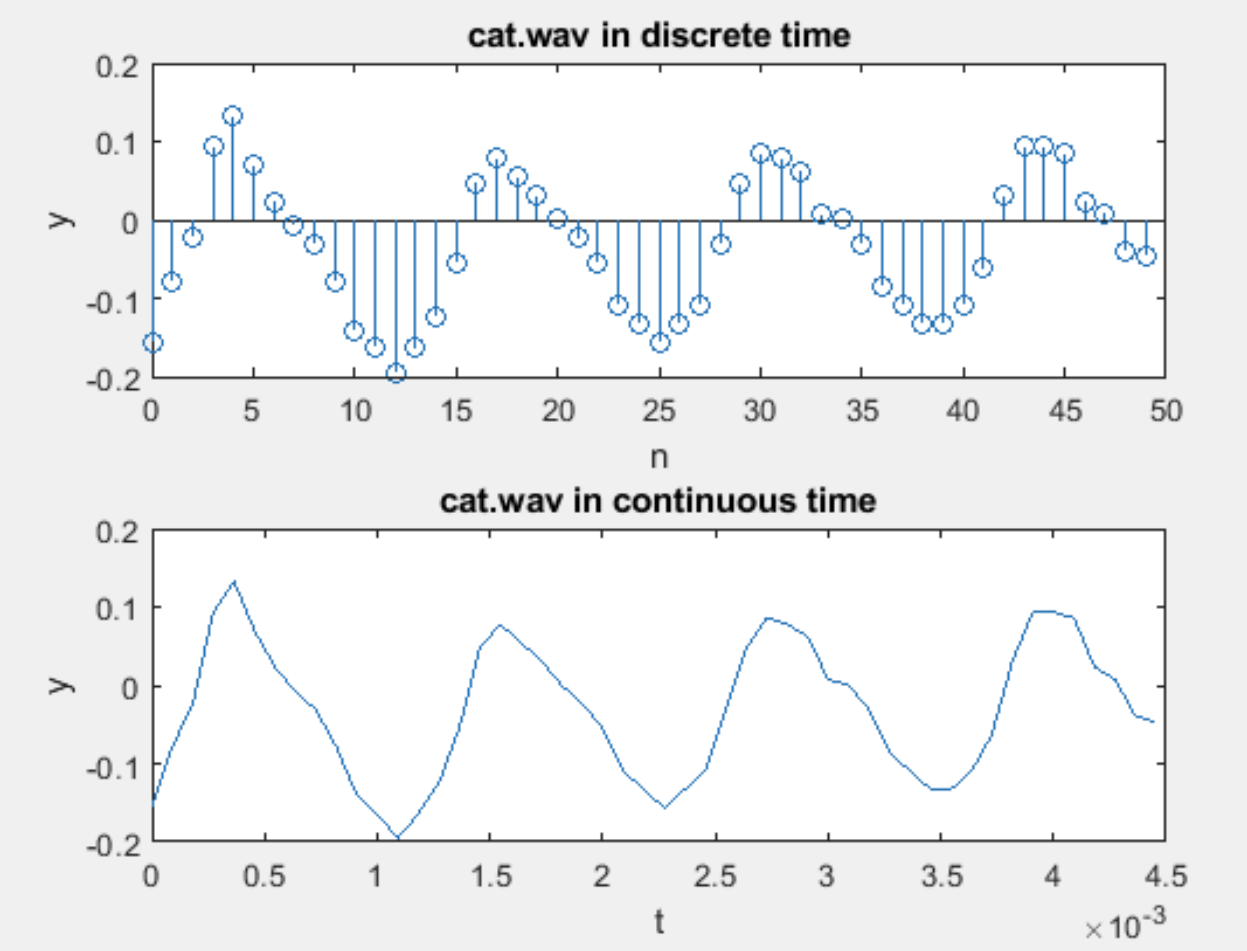
1 PLOTS





The graphs are plots of first 50 sampling points in continuous time and discrete time for a sinusoid and sound vector in cat.wav respectively.

2 LAB REPORT QUESTION

Write an equation that describes the meow sequence you implemented using x[n] as the original sequence.

My signal is defined as:

z = [y; zero; 2*y; zero; (1/2)*y];

which creates a synthesized sound that contains a unchanged original meow, and two modified meows that have twice / half the amplitude of the original signal respectively. There are also two pauses between three signals. Each segment has the same length (duration) of the original meow. Since Length(y) = 6447, the mathematical expression of z is:

z[n] = y[n] + 2*y[n – 2*6447] + 0.5*y[n – 4*6447]