Department of Electrical & Electronic Engineering

Imperial College London

ISE1/EE2 Computing Lab: Learning MATLAB (not assessed)

Introduction

This lab session introduces you to Matlab and enhances what you have learned at lectures. No deliverables are expected.

Exercise 1: Trying it Out

Go through the examples in the notes for lectures 2 and 3. Make sure that you understand them.

Exercise 2: Noisy Sinewave

- Generate a vector signal with 4 cycles of 1kHz sinewave at a sampling frequency of 44.1kHz and an amplitude of 1V.

- Plot the signal on the screen and label the X and Y axes with the correct labels.

- Convert your matlab code into a function in an M-file.

- Use 'helpdesk' to lookup the description of the built-in function randn().

- Generate a normally distributed random noise signal, also at 44.1KHz with the same number of samples as your sincwave. The rms value of the noise should be 0.1V.

- Add the noise to your original signal and plot it.

- Plot all three signals as a combined plot.