Mechtron 3TB4: Embedded Systems Design II
Tutorial 3

Name:_____ Name:_____

Building a digital filter using Matlab:

In this tutorial we are going to decrypt secret information using a software filter. Each group will be given a wave file that contains a secret code for that group only. A deliberate noise at some frequency is added to the file in order to disguise the information. Your task is to build a software filter using Matlab to filter out the noise so that the secret information can be revealed (hearable by headphone).

The wave file for your group (secret_code_groupX.wav, where X is your group ID) can be found in your group's subversion repository at
https://websvn.mcmaster.ca/mt3tb4/groupX/Lab3/secret_code_group#.wav
where # is your group ID. The type of filter we are going to build is the FIR filter that was discussed in the class. Matlab has a set of DSP functions that enables us to do this easily.

Please follow the instructions and fill in the blanks:
Start Matlab. The following commands perform the filtering; before you execute them, read the help files of these functions by using “help FunctionName" to understand their use.