This program creates and displays Mel-frequency cepstral coefficients for a given input signal.

mfccMain()

- Displays Mel-scaled frequency of input signal
- Creates and displays MFCC matrix of input signal

freqToMel(numMel, numFFT, fs)

- Maps frequencies to mel scale
- Creates a matrix for dot product operation with DFT of windowed signal

Arguments:

numMel: number of desired frequencies in the mel bank

numFFT: number of FFT points in the spectrum to be converted

fs: sample rate of signal to be converted

myMFCC(numCoeff, numMel, x, fs, numFFT)

- Obtains power spectrum of windowed signal
- Maps frequencies in window to mel scale
- Takes the log of that window
- Extracts major peaks in window
- Performs Discrete Cosine Transform
- Place power spectrum in element 1 of DCT matrix
- Progressively stores processed windows in an MFCC matrix

Arguments:

numCoeff: desired number of MFCC coefficients

numMel: number of filters in the mel filter bank

numFFT: number of FFT points to be used per frame

x: input signal

fs: sample rate