Group 51: Digital Hearing Aids

Dataset: Audio Files (Human Speech)

* The basic function of a hearing aid is that it transforms the audio file such that the user (hearing impaired person) can hear it
* so, we don’t exactly need a huge database of audio files.
* We’ll have few pre-recorded audio files in our dataset and we’ll perform the hearing aid operations and compare the show the output audio file.

Analysis:

* Basic Hearing Aid implementation in MATLAB just modulates the code to the user Hearing range. (Frequency modulation)
* For this project we’ll be taking the full advantage of MATLAB functions and toolboxes to clarify the audio signal
* So far, we have implemented a low pass filter to obstruct signal above 20,000Hz (Maximum Frequency which humans can tolerate).
* We added a denoising filter to remove unwanted noise.
* We’re currently working on Frequency shaping function and Amplitude Modulation