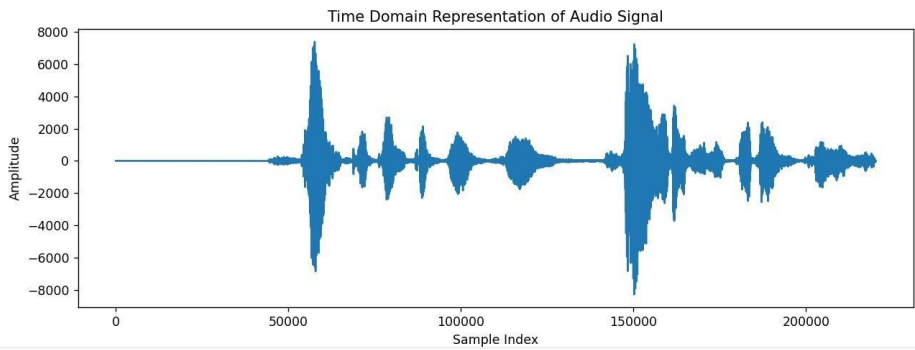


Name:	Hatim Sawai
UID:	2021300108
Experiment 3 (Application)	

PROBLEM DEFINITION:	Analyze the Audio Signal in frequency domain.
ALGORITHM:	<ol style="list-style-type: none"> 1. Record Audio Password and filter the noise ==> $x[n]$. 2. Plot $x[n]$. 3. Transform Audio Signal $x[n]$ from Time Domain to Frequency Domain using DFT ==> $X[k]$. 4. Plot Magnitude Spectrum of $X[k]$.

EXPERIMENTATION AND RESULT ANALYSIS:

RESULT:	<p>Graphs:</p>  <p>The figure is a line plot titled "Time Domain Representation of Audio Signal". The y-axis is labeled "Amplitude" and ranges from -8000 to 8000 with major ticks every 2000 units. The x-axis is labeled "Sample Index" and ranges from 0 to 200,000 with major ticks every 50,000 units. The plot shows a blue line representing the audio signal. It starts at zero, remains flat until approximately 40,000 samples, then exhibits a series of oscillations. There are two prominent peaks: one around 60,000 samples reaching an amplitude of about 7000, and another around 150,000 samples reaching an amplitude of about 7500. The signal continues with smaller oscillations until the end of the recorded range at 200,000 samples.</p>
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