4. Experimental Methodology

The settings used for this lab were standard as in any of the past labs done, as well as in the same workspace as before. Programs used were Quartus Prime and ModelSim, and the hardware used was a DE2 board and a 4 button box.

5. Results

As for the results, the team ended up making the button panel send an input which would return an audio frequency depending on which button was pressed.Diagram

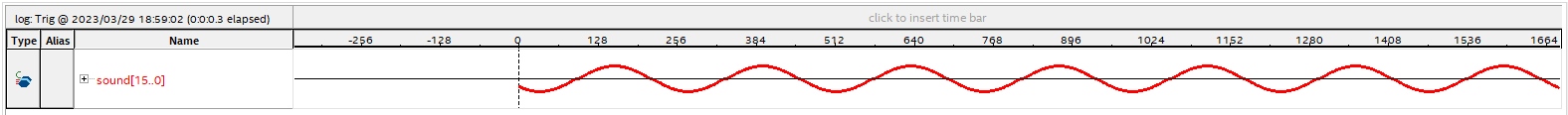
Description automatically generated with low confidence

The chart above was the team’s design for the audio frequency generator. Its purpose is to output a certain audio frequency to an audio output. It will change a bit later in the lab.

Diagram

Description automatically generated with low confidence

This design was made to convert that audio signal to a signal that is usable by the audio source.



This graph shows the output coming from our test implementation of the previous two charts.A picture containing diagram

Description automatically generated

This chart is the updated version of the first chart, equipped with the frequencies to be associated with each of the buttons.

Text

Description automatically generated

This code connects the colored buttons with each of their sound frequency values.

A picture containing graphical user interface

Description automatically generated

The result of adding the previous code with the first and second slides. A fully functional schematic.