**MSE 310 Project 1 Features Checklist**

**Group 19**

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Please type X in the status section for a completed feature.

X – implemented

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| --- | --- | --- |
| **ID** | **Feature** | **Status** |
| **1** | **Input Channels (15%)** |  |
| 1.F1 | Able to direct input from a PC’s microphone jack |  |
| 1.F2 | Read prerecorded .wav sound file | X |
| 1.F3 | Read a prerecorded csv file | X |
| 1.F3.1 | Read a two-column csv file, select channel (L/R) using a switch | X |
| 1.F4 | Control – Switch between CSV or WAV file input | X |
| 1.F5 | Error Handle – When no input file (csv or wav) is selected when the program is run, display a message that says:  “No CSV file selected”  AND/OR  “No Wav file selected”  The program may continue to run after the error | X |
| **2** | **Time Domain Features (30%)** |  |
| 2.F1 | Able to display the time-domain signal on the screen | X |
| 2.F2 | Knob to control the time [Jas] | X |
| 2.F3 | Knob to control amplitude (Gain) | X |
| 2.F3.1 | Knob to control the amplitude property (using property node) | X |
| 2.F4 | Knob to control phase | X |
| 2.F5 | Knob to control offset | X |
| 2.F6 | Mini display of the calculated peak – peak amplitude, RMS, and frequency of the signal (if periodic) | X |
| 2.F7 | HOLD button to freeze the screen | X |
| 2.F8 | Vertical cursors to measure time difference between the cursors | X |
| **3** | **Frequency Domain Features (30%)** |  |
| 3.F1 | ~~Switch~~ Tab control to show single sided Fast Fourier Transform (FFT) of the input signal | X |
| 3.F2 | Low pass filter to the input signal | X |
| 3.2F.1 | User can choose cut-off frequency between 1-20 kHz | X |
| 3.2F.2 | Drop down menu to select the type of filter | X |
| 3.2F.3 | Control the order of the high pass filter | X |
| 3.3F | High Pass Filter to the input signal | X |
| 3.3F.1 | User can choose cut-off frequency between 1-20 kHz | X |
| 3.3F.2 | Drop down menu to select the type of filter | X |
| 3.3F.3 | Control the order of the low pass filter | X |
| 3.4F | Able to apply a moving average filter to the signal | X |
| 3.4F.1 | Control the averaging window size | X |
| 3.4F.2 | Overlay the average on raw input | X |
| 3.4F.3 | Apply the moving average to the original | X |
| 3.5F | Select Filter: Bandpass, Bandstop, Smoothing | X |
| 3.5F.1 | Filter signal using Bandpass, Bandstop, Smoothing | X |
| **4** | **Aesthetics and User Interface (15%)** |  |
| 4.1F | The user interface ~~AND block diagram~~ is easy to understand | X |
| 4.2F | Program is divided using subVI’s | X |
| 4.3F | Program is documented using comments | X |
| 4.4F | The user does not need to scroll up or down, the program auto fits a user’s monitor regardless of monitor/display resolution | X |
| 4.5F | Auto button – Scales Amplitude to fit signal | X |
| **5** | **Other Features (10%)** |  |
| 5.1F | Save scope screen as ~~png~~ jpeg | X |
| 5.2F | Web Interface |  |
| 5.3F | The program is available as a generated binary file, so a user does not need LabVIEW to run the code (see Application Builder) | X |
| 5.4F | User Manual | X |