

Massachusetts Institute of Technology
6.111 Project Checklist
Delta-Sigma Heart Rate Monitor

Level 1 Commitment Goals

1. Generate heartrate bits and display them on monitor
 - Implement analog circuitry
 - Implement Delta-Sigma Analog to Digital Converter
 - Take heart rate bits and display them on the monitor
 - Display beats per minute on the monitor
 - Display will be using ASCII font

Level 2 Intermediate Goals

2. Generate heartrate bits and nicely display them on the monitor
 - Implement analog circuitry
 - Implement Delta-Sigma Analog to Digital Converter
 - Modulation of heart rate signal with sine wave to hear output.
 - Take heart rate bits and display them on the monitor
 - Display beats per minute on the monitor
 - Display visual status on monitor
 - Display will be using custom fonts/pictures

Level 3 Stretch Goals

3. Generate heartrate bits and nicely display them on the monitor with additional waveforms
 - Implement analog circuitry
 - Implement Delta-Sigma Analog to Digital Converter
 - Implement Noise-Shaping
 - Take heart rate bits and display them on monitor
 - Display beats per minute on the monitor
 - Display visual status on monitor
 - Display Fast-Fourier Transform visual on monitor
 - Implement Interpolation for connecting data points
 - Display will be using custom font/pictures