**Summary of Each File**

main.c - Holds the implementation of all state machines.

**Includes**

avr-nokia5110-master - The folder holding the code used to display onto the Nokia 5110 LCD screen.

fft - Folder containing the code for the FFT. Intended to be used for the electret microphone.

lookupTempo.h - A lookup table used to convert the tempo into ms. This reduces the work the microcontroller has to do. Previously, the microcontroller was doing the calculation each cycle. The values would also be slightly off since it truncated the values instead of rounding to the nearest whole.

shift\_register.h - Derived from the [supplemental lab](https://ilearn.ucr.edu/bbcswebdav/pid-2831341-dt-content-rid-15559788_1/courses/CS_120B_001_17W/eecs120b_labX_external_shift_register.pdf) detailing shift registers. Modified into two functions that use PORTD. Makes it so that each nibble of D transmits data to their respective shift registers.

**Credits**

[Nokia 5110 Drivers](https://github.com/LittleBuster/avr-nokia5110)

[FFT for AVR](http://elm-chan.org/works/akilcd/report_e.html)