JukeBox:

Play from a selection of songs through a speaker. The song title will be displayed on the LCD screen. The LED's connected will light up and dance with the song.

Controls:

- To select a song, use buttons connected to A0 and A1 to choose a song. A0 selects the next song while A1 will select the previous song.
- To play your selected song, press the button connected to A2. To stop the song, press the button connected to A2 again.
- To speed up the song, press A3. Note that there is a maximum speed to which a song can be set.

Technologies and Components:

- AVR Studio 6
- ATmega1284
- Speaker
- 4x Push Button
- 4x 330 Ohm Resistor
- 4x 5mm LED
- LCD Screen
- 10k potentiometer
- Power adapter

Video Demonstration:

https://www.youtube.com/watch?v=5l4ot1A8iqE

Source Code:

https://github.com/wendingoli/Jukebox/blob/master/Jukebox/main.c
The source code that controls the entire program.

Used outer sources:

http://discuss.littlebits.cc/t/playing-a-melody-using-a-button-a-counter/25035
I used this code's note definitions for my program.

How I wired my board:

- Buttons are connected to PA0 through PA3
- LEDs are connected to PD0 through PD3
- LCD is connected to Port C
- Speaker is connected to PB6