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CMPE 311
Section MN 4:515
Project part1 report

This project is about making music player using the buzzer of atmega169p. The hardware accessories for this project includes the atmega169p, avr butterfly and serial cable. This project is made in C using avr-gcc.

The libraries are being used includes AVR/io.h, AVR/pgmspace.h, util/delays.h and some of C standard library string.h . The main tasks include using serial terminal to communicate with user, getting input from the user, handling conversion, storing a song note, retrieving a song note and convert song note and playing them.

The First part of the project is to get song note form the user, store in the appropriate format. Song notes ,A-G and R to beak, are read as string and then converted to a uint8_t either by using a left shifting by 5-bit or AND gate with 0x1F..

The second part playing the note which involve unpacking the ascii character. Each ascii character corresponds with a frequency value from table on project link, which is used to calculate the number of iteration and half period . However, for this part of the project, we are using the given half period value.

As of the submission, I have made some design mistakes in terms of following the instructions. Three days ago I have attempted to actually go all in and try to test buzzer instead of actually testing the functions that I have implemented with printf. But I have

realized that I don't have the time to implement everything and I could do so. Also I am I lost one of my serial cable to connect to the serial. But I am pretty sure work as I want because I tested the value of the function on linux terminal.