aditijb@stanford.edu
Win 2024 | CS107E Final Project

Tetris

See main project document

ASK JULIE FOR:

- Long mini-normal hdmi cable

Checked out from CS107e

- 1 active buzzer
- 2 passive buzzer
- 1 LSM6DS33
- 1 logic analyzer
- 1 long HDMI-HDMI cable

Parts/Physical modules

- Handheld controller device (think Wii remote but simpler)
- Music (via. active buzzer)
- Connects to monitor via. long hdmi cable (tethered controller)

✔ MangoPi (microcontroller) **(processor)**

- Yep!
- NEED FROM LAB: another mango pi? (to solder directly to have a more compact remote)

Accelerometer (tilt) **(input)**

- ~~NEED FROM LAB (LSM6DS3TR)~~
- Got from lab: LSM6DS33
- MSA311 datasheet (`MY_I2C_ADDR = 0x62`)

✔ Buttons (as necessary) **(input)**

- 1 button configured w/ interrupt

✔ Servo (for vibration/haptic feedback) **(output)**

- 1 servo configured for vibrate

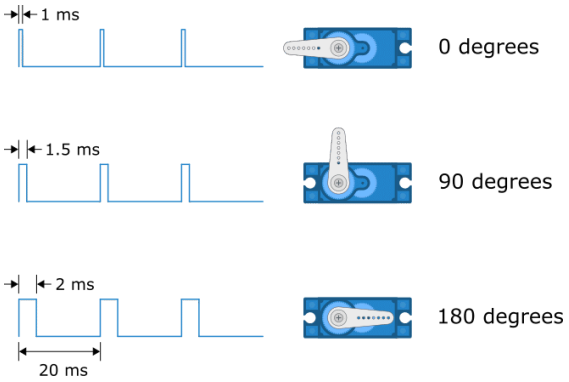
*https://learn.sparkfun.com/tutorials/basic-servo-control-for-beginners/all

- brown GND, red 4.8-6V, orange CTRL (PB1/PWM4)

*https://learn.sparkfun.com/tutorials/hobby-servo-tutorial#servo-motor-background

The pulses occur at a 20 mSec (50 Hz) interval, and vary between 1 and 2 mSec in width.

*https://www.makerguides.com/servo-arduino-tutorial/ - PWM control



Active buzzer (music!) **(output)**

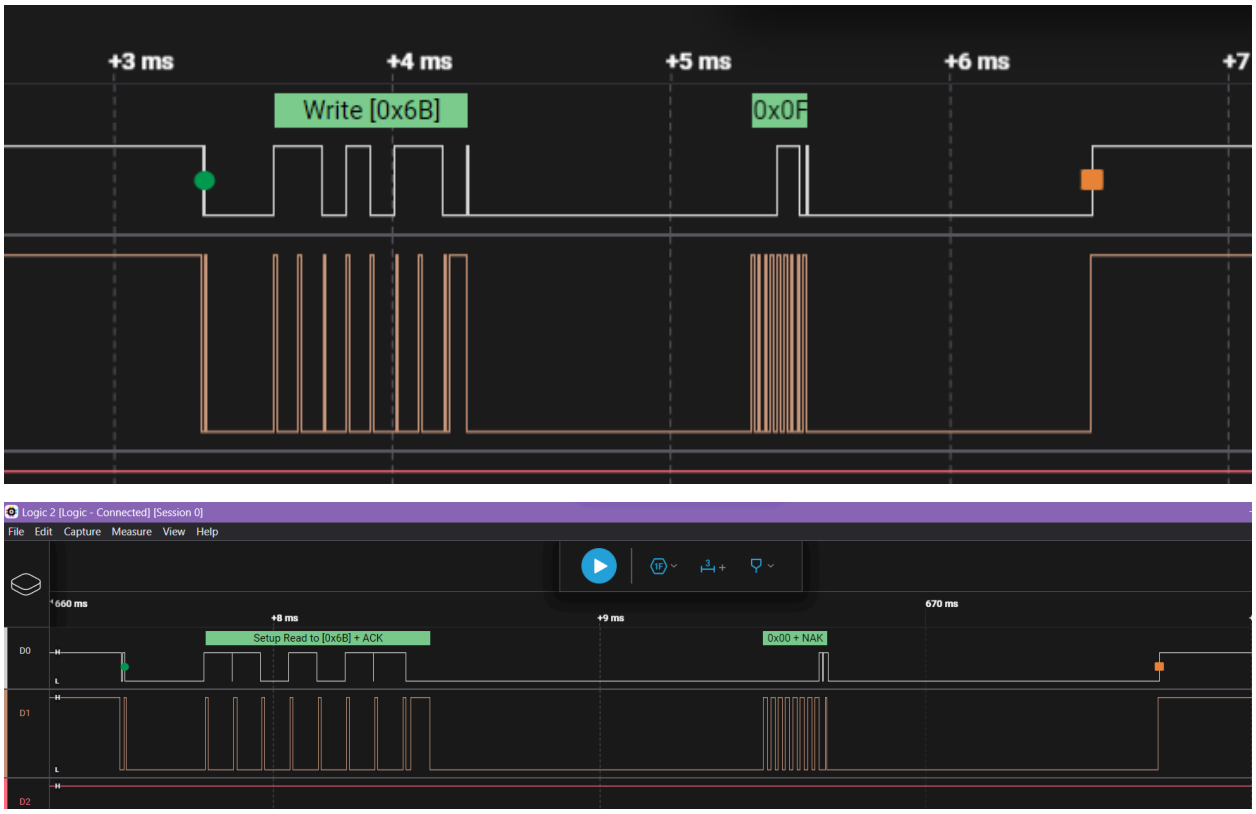
- NEED FROM LAB

*https://blog.tarkalabs.com/digital-audio-101-playing-audio-from-a-microcontroller-5df1463616c

- has code

I2c stuff

Ack'ed:



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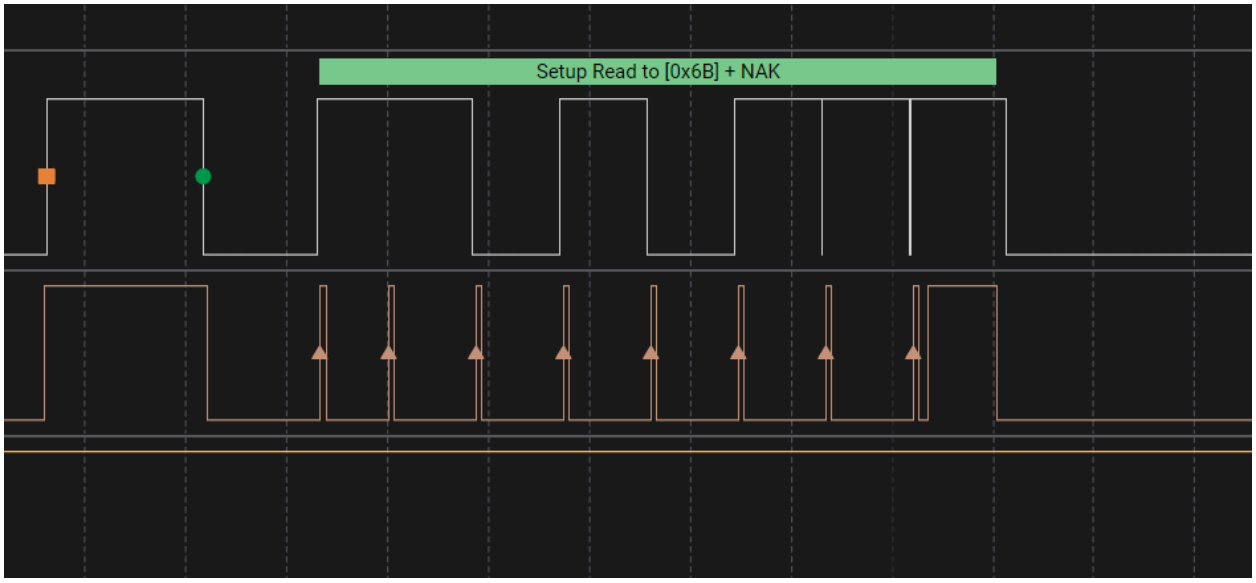
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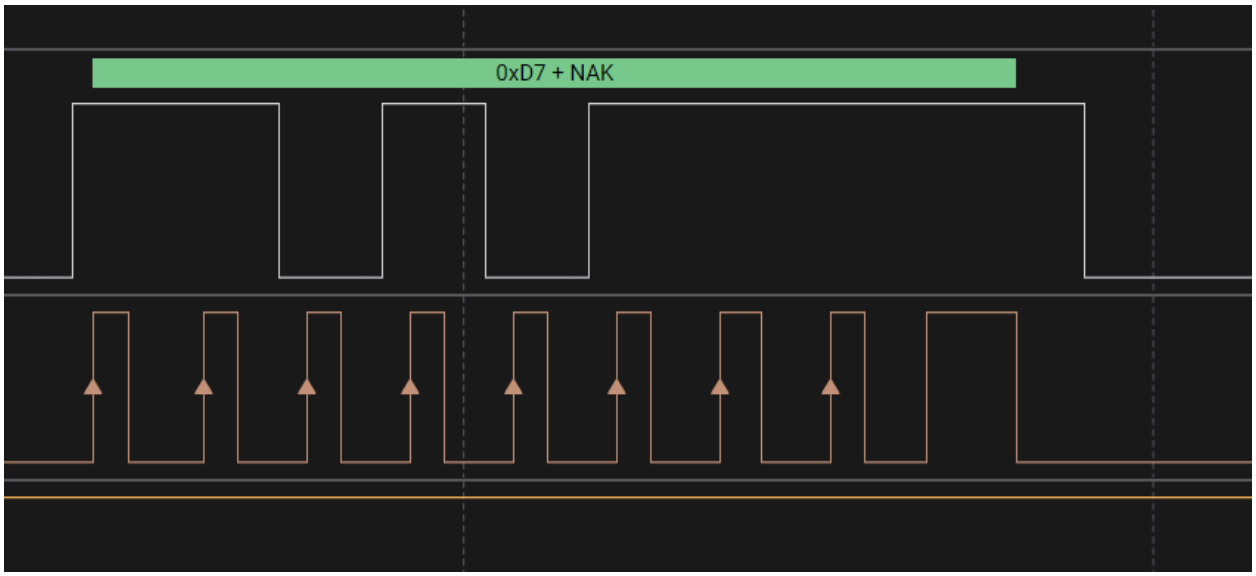
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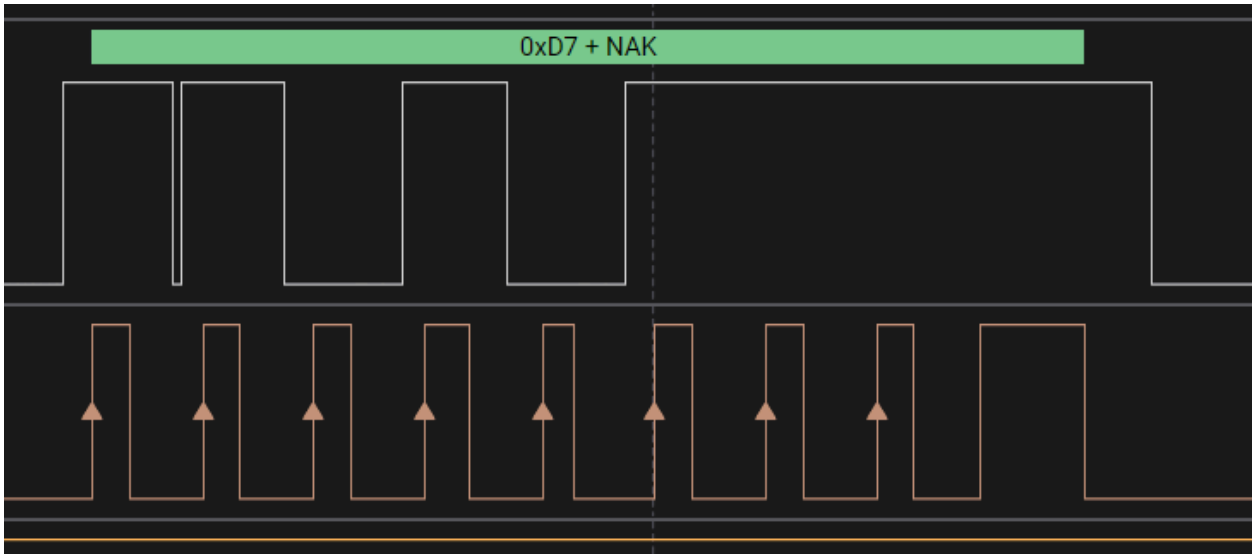
0xD7 + NAK