Notes

4/9/13

write to sd card - nothing shows up on computer

* computer might not be looking for bits of data, but rather, specific files/filing systems
* Difference when using pic24 or pic32: make sure pin assignments are right, serial routines
* can you turn off the real time clock so you don't have to wait for it to become stable
* different approach: forget file system, read from one file. figure out where the one file is that contains all your data and code to read through that single file.
* is our approach sufficient for our project? difficult to bring up entire file system. real time clock issues. other groups didn't bother with a file system. just did initialization sequence and get address of first byte of the file and read from there.
* where does that start reading from? look at sd card spec. first uses initialization sequence. there are commands that sd card recognizes. send it command and sd card will respond to it. should be command to set pointer to certain location and etc....
* board diagram and schematic on sakai?
* look up led zeppelin group from 3 years ago and check how they did it in their code

lasers- had to pay individual shipping of 4.50, so we need to find new source for lasers

touch screen might not be able to happen by deadline. Make sure we have lcd serial display screen to use. lcd uses 5V, ground, and 4 other pins - 6 total pins. we want screen and buttons on separte boards. screen doesnt need to be mounted on board, 3 keys on little board, make up a cable to plug down into main board. find out what connector you would need from little board to main board. make sure you have an extra SPI open. Make sure analog pins dont mess any of that up. should be ok with Pic32. most common problem is having analog pins set digital or vice-versa

everything defaults to being an input, if its analog input then thats what it defaults to

generating audio in pwm

interrupt after each period. you can update while period is low. if you know when it goes low, you can reload the period register. using buffer. fixed period, change duty cycle.

reading right off sd card or load a table to microcontroller? what if sd card doesnt work. backup plan? SD card will work at higher speeds, not comfortable that microcontroller will be able to keep up with that speed. wouldn't hurt to drop a memory chip on to board, small 8 pin package, just in case its not fast enough, you can read from sd card to memory chip and go from there. When you are reading from a disk, you are reading some number of bytes, and he is not sure how fast you can do that. doesn't know if you can get byte and do something with already obtained byte and maintain speed. From computer end it will be hard to put file on sd card that doesn't have file system around it. if you only have one file on disc, you only need to know where that one file is and read the right bits from that file, saves a lot of I/O stuff with sd card

for lit buttons need current limiting resistors. can parallel that together. need ground and three other leads. not sure what else we will need for lit leds.