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- 1. Make a Buoy that will take pH readings and temperature readings, at both 1m and 2m, every hour. It will then send the data to a central repo and display the data on a webpage.
- 2. Goals
  - a. Make a functioning website using flask
  - b. Have a pi take data and store the data if there's no wifi. If there is wifi, send it to a central rep
  - c. Make a floating buoy that can house both the pi and its sensors.
- 3. Implementation: Make a floating buoy using this website guide http://www.instructables.com/id/BUOY/?ALLSTEPS

After this we will use flask and other materials provided to use to code for the pi.

- 4. /5. Buoy
  - a. Make the buoy
    - i. We have all of the wood measured out and have all the initial cuts done. We are looking to get a more fine tool to make sure we cut the buoy correctly. We have all of the other materials to attach to the buoy itself including our flotation devices. We will ask you about tools in class on Monday.
  - b. Make sensors take data and log the data within sqlite3
    - We have all of the temperature sensors working. We need to work on getting the pH sensor working. We have our sqlite3 code done from the earlier assignment.
  - c. Make a website take the data and display a data chart and a graph of the data
    - i. We have played around in flask but haven't found finished our method yet. We are thinking about using plot.ly for the graph or even using the statistics program R in some manner. More research is needed however.
  - d. Attach the pi and assorted sensors to the buoy.
    - i. Can't do until buoy is made
  - e. Run the system
    - i. Can't do until the other parts are made.
- 5. ^^listed above
- 6. Easy:
  - a. While time consuming, the making of the buoy has been pretty easy so far. We just need more tools to make sure we do it correctly.
  - b. Code for the sensors is already basically done from what we did in class earlier. We need to edit it for the pH but there are numerous guides for that online. Shouldn't be hard.

## Hard

- a. Lack of knowledge in web programming will make all flask work more complicated.
- b. Same goes with making a graph that updates in real time.

- c. Manual labor
- d. Battery??? Looked a few solar chargers online but need more info
- 7. Over the next week we hope to have our buoy finished and have some form of functioning graph in flask. After that, we plan on making the entire contraption look nice.
- 8. Both of us have both worked the same amount of time on the same things so far. We got together to make the buoy and we both have the code ready for sqlite3. The other partner we have is Guiherme De Lima Menezes has had no contact with us within any reasonable timeframe. He is not a part of our group seeing as he has done no work and has not really made an effort to contact us.