Fish Tank Monitor Week 4 Updates

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Since beginning the Fish Tank Monitor project, we have made the decision to shift our design away from using several sensors that each collect data for specific parameters and instead plan to use a single color sensor for the majority of our parameter testing. The color sensor will allow us to use test strips that are already available at most pet stores. This improves the design by allowing the user to potentially recalibrate the device if necessary, removes the need to calibrate several sensors, and will improve the ability to test the product because we can compare the results from the sensor to a typical color test strip chart included with the test strips.

We have also decided to implement a data collection system that will save the parameter history in a micro-SD or USB drive. This is beneficial because the user can track the water parameters over a longer period of time to properly gather information about the health of their aquarium. We will include an LCD screen where the parameter values can be displayed along with alerts regarding user-set routines. The routines that the user can set are for feeding and cleaning schedules. The routines will be adjustable in a settings page.

We have begun the early stages of designing a user interface. The design is meant to remain simple while still allowing the user to effectively track the parameters of their aquarium. The display will show a home screen where the user will see a current temperature and have the option to open the settings, history, and inhabitants list or start a new test. The settings page will give the user the option to update the time and date, change their routines, and adjust their preferred parameters. The parameters we will implement testing for include: pH, nitrites, nitrates, ammonia, temperature, light, and salinity.

Our Fish Tank Monitor team has dedicated ourselves to meeting every Thursday at 7PM. During this meeting, we recap the work done over the previous week, discuss what we will do during the following week, discuss the project, and complete necessary tasks. In order to keep our tasks organized, we have created a task list that is shared between all members of the team. This list is updated as we encounter issues, come up with new ideas, and progress through the project.