

Answer Input System

Alex Beebe

Problem Definition

- **Statement:**
 - Teacher and Student Communication during class
- **Scope:**
 - Have a working software output display and possibly have working hardware inputs as well
- **Schedule:**
 - Have a working software output display by June 12th and if the code is finished for that before June 12th start on creating a working hardware input
- **Resources:**
 - Java for the output, Engineering lab equipment for input devices, and an arduino chip for communication via usb or Bluetooth
- **Specific Solutions:**
 - Student input devices will have four inputs, three for how much they understand the question asked and one for if they have a question
 - Software output will have four colored lights for each desk corresponding to the buttons on the input
 - Software output will also display total of each button pushed and it will have a clock as well

Research/Analysis

- Different types of connections for the hardware input: Bluetooth, RF, wired connection. Separate input device for each desk. One output that runs on the teachers computer

Proposed Solution

- Single hardware input for each desk
- Four buttons per input
- Light to indicate low battery on each input
- Light to indicate power on the input
- Single software output for the instructor
- Clock in the top left of the output display for the instructor
- Three counters being displayed on the output to show totals of each button pressed on the inputs
- Output will give a message when each device is connected and disconnected
- Four lights per desk on the output to show which button has been pressed
- Reset button on the output to clear all current information
- Possible wireless input devices for future designs

Potential Applications

- To incorporate this into classrooms to help with teacher and student communication during class. This will help with students that don't want to say if they don't understand a question because they feel like they are the only one. It will allow the teacher to know who doesn't understand but not any of the other students.

