Project Write Up

Project:
Smart Clock

Members:
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Status:
Design/Development & Implementation

Schedule:

Week of 4/2

Continue working to connect with wifi, and obtaining information like time, date and weather.

Week of 4/9

Complete wifi and bluetooth connections(if that is the route we end up taking). Finalize inner workings of lcd display with time, date and weather communications, and have alarm set up with either buzzer or music from a phone.

Week of 4/16

Fix up any small bugs that we may still be troubleshooting, with the plan to have the device up and running by the end of the week, also continue work on the final write up

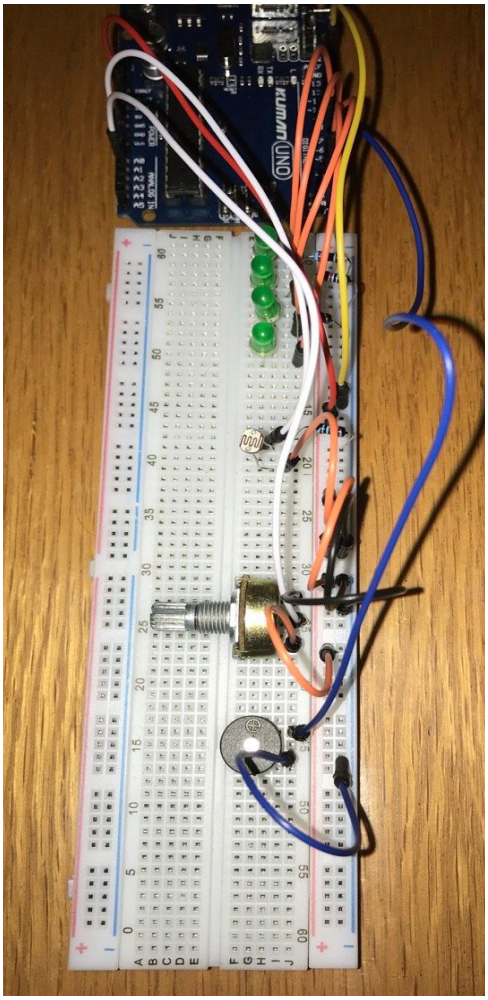
Week of 4/23

Finish final write up and video for submission

Week of 4/30

Check in working device with TA if not already done before then

Progress:



So far in this project we have accomplished connecting two arduinos together using a serial connection so that we can pass information from one arduino to the other. What we will be passing will be a signal to the buzzer, so that it starts to buzz based upon the alarm or alarms that the user has set. We have also managed to get time to be displayed on the LCD screen along with the dates current day. We also completed setting up the photoresistor to account for the amount of light present and lighting up led lights accordingly along with the LCD if that is possible.

Things that Haven't Worked:

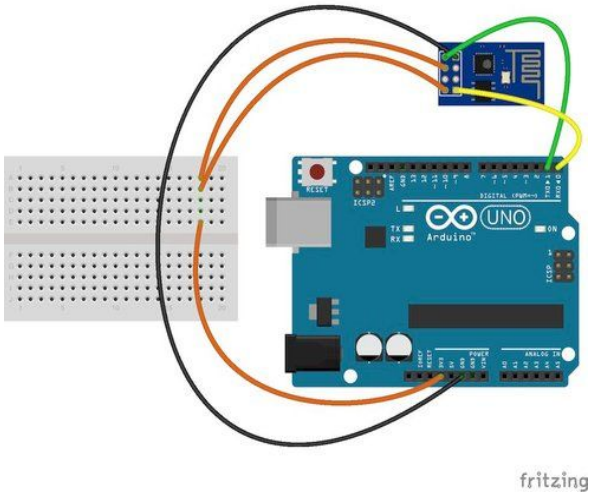
We have been having trouble connecting an arduino to the WIFI, so that its able to obtain a current time and date. That information will be displayed by the LCD's to the user.

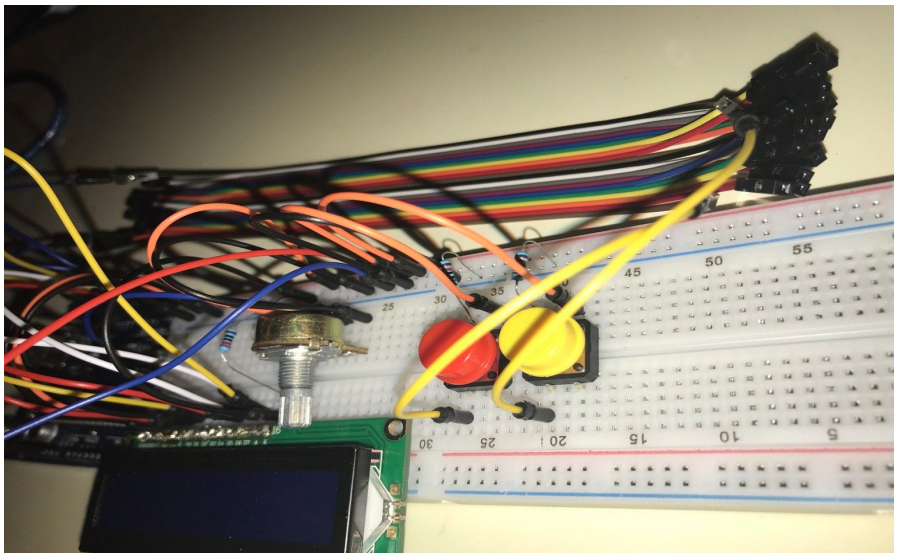
Things that Need Change:

We are deciding whether or not it will be possible to connect to a phone via bluetooth, so that it plays music through a speaker that's connected to the arduino. Instead we were thinking of eliminating the speaker system and replacing it with an alarm for the clock. On the other hand, if we could get phone to arduino connection via bluetooth, it would be cool to be able to connect and have the alarm play a certain song of choice from the phone.

Updated Concept: (planned wifi diagram below)

We still plan to use pretty much the same idea as our last write up. Photo resistors and led lights will be used for presenting the amount of light in the room, connecting to wifi will be used to collect weather, date and time information(different time zones), and that info will be displayed on the lcd and 4 7 segment that looks like a mini scoreboard. We plan to use buttons to display the different time zones, so whenever the button is pressed a different time zone will be displayed. We also plan to have an alarm clock that will be set through the serial input and the sound will go off using a buzzer. We will have another button that will be used to disable the alarm clock.





(Pictured Above- LCD display connected to buttons for different time zones**)**

Tutorials Being Used:

- https://maker.pro/projects/arduino/arduino-alarm-clock-using-real-time-clock-lcd-screen
- https://create.arduino.cc/projecthub/Annlee_Fores/simple-arduino-digital-clock-without-rtc-7d4303
- http://42bots.com/tutorials/how-to-connect-arduino-uno-to-android-phone-via-bluetooth/
- http://www.instructables.com/id/Add-WiFi-to-Arduino-UNO/