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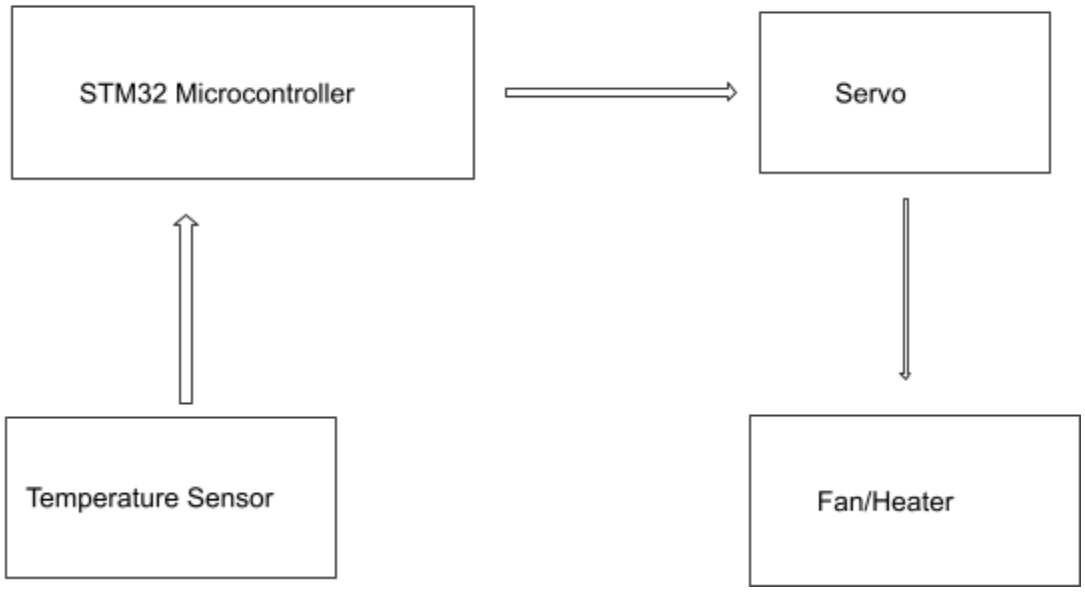
Temperature Controller
ECE 153B Project Proposal

Overview:

This project aims to create a temperature controller at your house. It will first monitor the temperature of the current room you are in, then depending on if it is too hot or too cold, it will adjust the temperature accordingly in order to make sure it is at room temperature. The user chooses which mode the controller can be in, as it can be connected to a heater (too cold mode) or it can be connected to a fan (too hot mode). This is done by having a temperature sensor monitor and log the temperature of the room frequently in 10 second intervals. Then if a specific temperature is reached whether it is too hot or too cold, the microcontroller would command the servo to be activated which should be connected to either a fan or a heater where the button will be pressed.



Materials:

STM32 Discovery Board
DHT22 Digital Temperature and Humidity Sensor
Fan or Heater from home
Servo Motor

Software Structure:
First we need to program whether or not it is connected to the fan/heater, this is most likely going to be user input shown in the led screen given from the STM32 board. Then the user can set a threshold so that if the temperature sensor exceeds it, the servo is triggered and it will press the button that is on the heater/fan.

Responsibility:

Larry will program the servo to be compatible with heaters and fans and the functionality of the servo to turn on the heater/fan.

Anthony will program the temperature sensor and the call to trigger the servo if it reaches a specific temperature.

Link to website:
https://sites.google.com/view/ece153b-larry