Tempter controller

Proposal

CS 207

Alex Niebergall

Introduction:

This project is using an Arduino example program to apply application for the program with modification to better to suit the goal of the project. The goal of this project is to take the tempter of a room to determined to either open up the window or to close it. The original work that has no modification CS 207 lab 6-example code Sweep by BARRAGAN.

Modification

The original work is the Sweep Example code in the Arduino named Sweep. Modification is placing a tempter sensor into it to allow for the tempter to be sense. The code will be modified to make the servo more useful at opening the window or to work with the temp sensor. Changes will be made to the program or the hardware to better suit the project goal or to accomplish the task.

Why is this project is being pursuit

The reason why this project is being pursuit is that the originally project was to make the Arduino to play dark souls but many compilations where present so the project had to be changed. The idea is to use the Arduino to open up the window and by using the tempter gauge. The reason is to allow more creativity to be applied with out the originally work being overbearing for when the project is being made. A neither part is to allow a room to be cooled down without manually opening the window. The modification would to use the tempter gauges to take the tempter and by using functions and if statements will be used to call function to spin the servo one-way or the either. There are some problems that are present since a window is a heavy object to move the servo might not have enough power to move it either ways might be need to be used to move it.

Plan one (default plan)

This will be the originally plan is by using one servo the will move the window to open and close it. This is the most simplest to open and to close the window and with the not as much changes to the original code. This also has the highest chance of not working because of the strength of the window.

Plan A

The next one is a bit of more complication is by using a neither servo to make the work be given to both servos. This dose not mean one more servo servos will be add more of if the window still dose not move until either no more servos are left or the window opens. The problem is this will just add more servos to the system and make the program a little bit more complex. Mostly to the original program will be change a bit but mostly the same code over and over again.

Plan A-2

This is pretty much the same plan as plan A with the servo but adding motors as a way to give more strength to opening the window. Same thing but now also will have the motor setup as while as servos. Both pans might have a problem with power supply.

Plan B

This is by using the servos and motor depending on if it works is seating them up like a conveyer belt to move them together which will spins them to move the conveyor belt to open the window. This might have problem with power supply or if one motor stops it will cause issue with the belt.

Material (This material will only be used for the default plan or plan A)

Arduino Uno Board 1

Bread board 1

9 GR servo 1

SM-S2309S 1

DC Motor 2

Wires

Tempter sensor 2

Diode 2

Transistor 2

Duct Tape

Lego

More motor and servo have been order as while

Mile Stones(I had look for when the project is due and all that stuff and really could not find it so these stretch goal are really just guess thinking that I st)

November 5 – All extra supplies will have arrive

November 16 –Built a Working model of the devices to open up the window

November 22 – all bugs or problem have been mostly sorted out

December 5- has added to the system a way for the vent to be open and closed

December 15- has added a noise sensor so it noise is applied the door is opened

The first extra milestones are there to allow the room to get hotter or colder faster. The very last one is to allow any pets to have access to the room.

This should work if no big issue comes up like no motors or servos work and new craze ideas need to be include to move the window. For the sketch goals they should be able to achieve. The only either problem with this is there is no indentation or knowledge of when this is all to due so a lot of guess.

Team roles(This is more of a joke its Just Alex Niebergall in this group so I have to do all the work):

Me: Do the coding

Myself: hardware build

I: presentation

Summary

This project has many challenges mostly because the original work is a very basic template that is going to be used as a template really. The challenges are mostly going to be opening up the window so it’s really good to get testing sooner then latter. With this project it will allow the window to be open with a certain tempter to be open and closed. This will also allow for very creative solutions to be used at very low cost of boredom. If this is successful then the user dose not need to open up there window to cool it down or to close it to make it hotter and last bit is it show how a very simple idea can be applied and change it to suit the situation.

Ordinal Code:

<https://www.arduino.cc/en/Tutorial/Sweep>

(BARRAGAN,(November 8, 2013),Sweep.[Source code]. <https://www.arduino.cc/en/Tutorial/Sweep> )