Smart Heating and Cooling System

A traditional temperature sensor has one job, which is its job is to adjust the temperature in your house or apartment, whether it is high temperature or low temperature. That is also job one for a smart temperature sensor, although a smart temperature sensor will give the function in a much different way.

Before we get too far into this and explain more details about it, know that you can use a smart temperature sensor just as you do a traditional one. That is, you can set the temperature on your own house that you like, but this time, smart home system will help you to achieve the required temperature. The smart home system with the help of the temperature sensor will communicates with your heater or air conditioner to run until the required temperature is reached. In addition, it means that we do not bother to find or use remote to change the temperature. This smart heating and cooling system will use the temperature sensor to detect outside temperature and then the air conditioner will respond to the required temperature. In our smart heating and cooling system, if the temperature is above 30 degree, then air conditioner will turn on and heater will turn off. Furthermore, if the temperature is below 10 degree, then vice versa. But air conditioner and heater will remain off if both condition is not reached.

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Figure 1: State Diagram of Smart Heating And Cooling System

Element of Smart Heating and Cooling System

In our smart heating and cooling system, the most important element is temperature sensor. This temperature sensor will work together with smart home system to achieve the required temperature. In addition, the feature also require the home owner elements which contain id,name and age of the home owner. This smart heating and cooling system also have air conditioner and heater. The heater and conditioner only can respond to the temperature detected if smart home system allow them to do so.



Benefits of Smart Heating and Cooling System

* It is easy to make change of temperature effortlessly

It is a lot easier to change the temperature without you need to use the remote. An ordinary home that does not require smart heating and cooling system need to change the temperature by themselves in every single situation. Whether it is cold or hot, they need to change it by themselves.

* It can save money and time

Air conditioner and heater cost a lot of money when it is turn on. For example, for our smart heating and cooling system, if the temperature is between 11 to 29 degree Celsius, the air conditioner and heater will turn off itself. Sometimes, we always forget to turn off heater and air conditioner as well even the temperature is not too hot or too cold. We do not also want to waste time of finding the remote since the tempartature will change with help of the smart heating and cooling system.

* It is more convenient

This is very important especially to old folks. Old folks always require decent temperature. They cannot afford too high or too low temperature.

Simulation of Smart Heating and Cooling System

* Normal Temperature

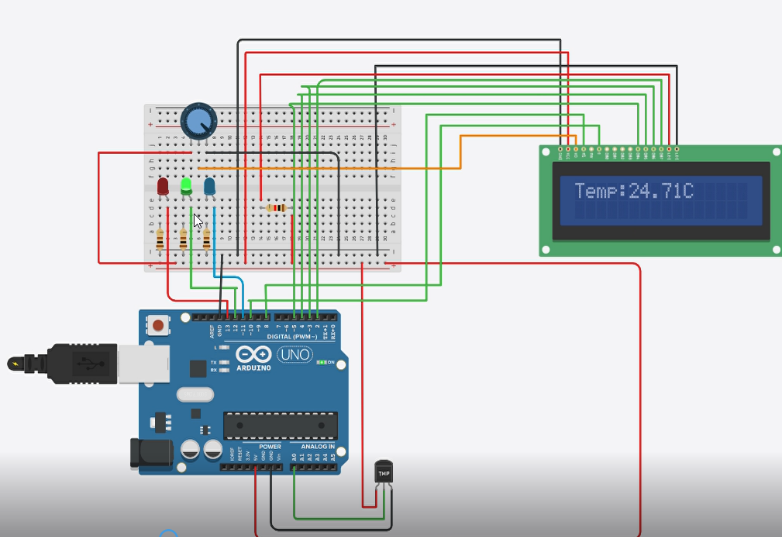
Green light indicates that the house is in normal temperature which the temperature is between 10 to 30 degree Celsius. Heater and also air conditioner will both turn off.

Figure 2

* High Temperature

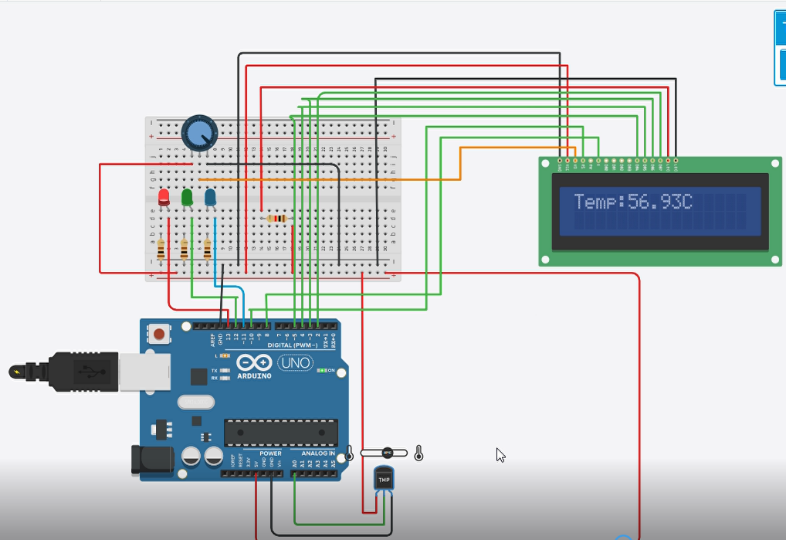
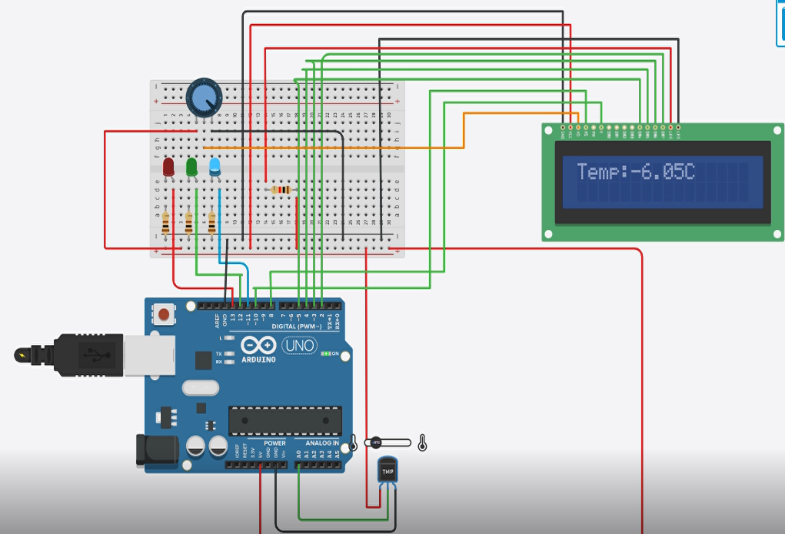
Red light indicates that the house is in high temperature which the temperature is above 30 degree Celsius. Air conditioner will turn on but heater will turn off.

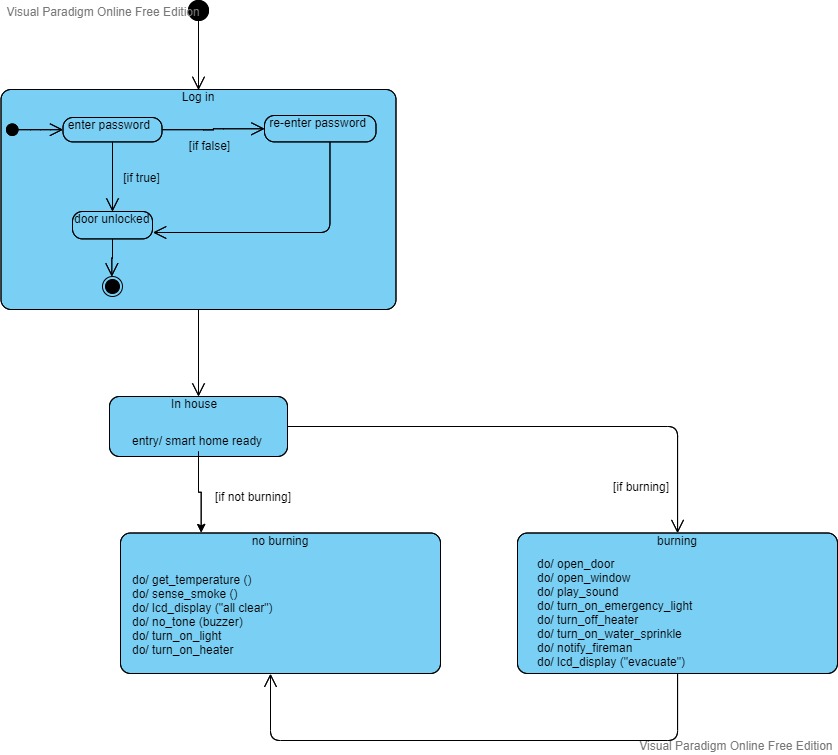
Figure 3

* Cold Temperature

Blue light indicates that the house is in cold temperature which the temperature is below 10 degree Celsius. Heater will turn on but air conditioner will turn off.



Scenario Test



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