Ravikumar P

19TUEC203

BE ECE

SKCT

ASSIGNMENT 1

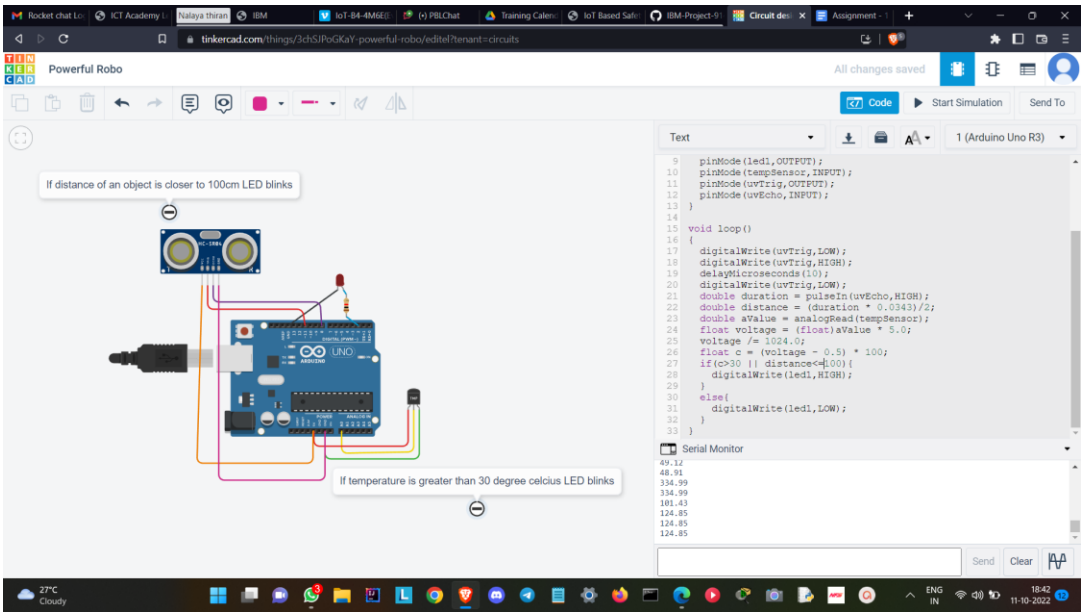
Problem Statement

Make a Smart Home in Tinker cad, using 2+ sensors, Led in single code and circuit.

Solution

- Used a UV sensor, temperature sensor and LED light.
- When temperature is greater than 30 degrees, LED turns on.
- If any object closer to UV sensor in the range of [0,100] centimeters, LED turns on automatically.

Screenshot



Code

```
// C++ code
//
int led1 = 2;
int tempSensor = A0;
int uvTrig = 11;
int uvEcho = 8;
void setup()
{
pinMode(led1,OUTPUT);pinMode(tempSensor,INPUT);
pinMode(uvTrig,OUTPUT);
pinMode(uvEcho,INPUT);
}
void loop()
{
digitalWrite(uvTrig,LOW);
digitalWrite(uvTrig,HIGH);
delayMicroseconds(10);
digitalWrite(uvTrig,LOW);
double duration = pulseIn(uvEcho,HIGH);
double distance = (duration * 0.0343)/2;
double aValue = analogRead(tempSensor);
float voltage = (float)aValue * 5.0;
voltage /= 1024.0;
```

```
float c = (voltage - 0.5) * 100;
if(c>30 || distance<=100){
digitalWrite(led1,HIGH);
}
else{
digitalWrite(led1,LOW);
}
}
```