

IBM ASSESSMENT-1

create circuit Piezo alarm ,PIR sensor ,tempSensor with below functionalities:

- 1.Alarm should sound in one manner if temp is above 60 c.
- 2.Alarm should sound with another frequency if motion is detected in PIR sensor.

Input Circuit Connection Screenshots:

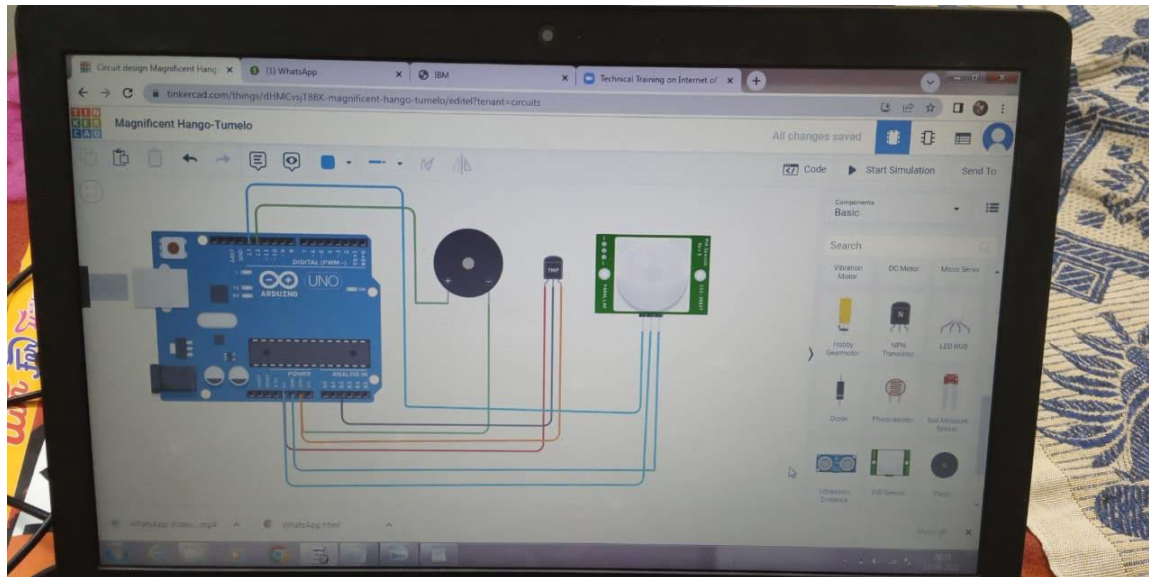


Fig1.Circuit with Piezo alarm,PIR sensor,temp Sensor

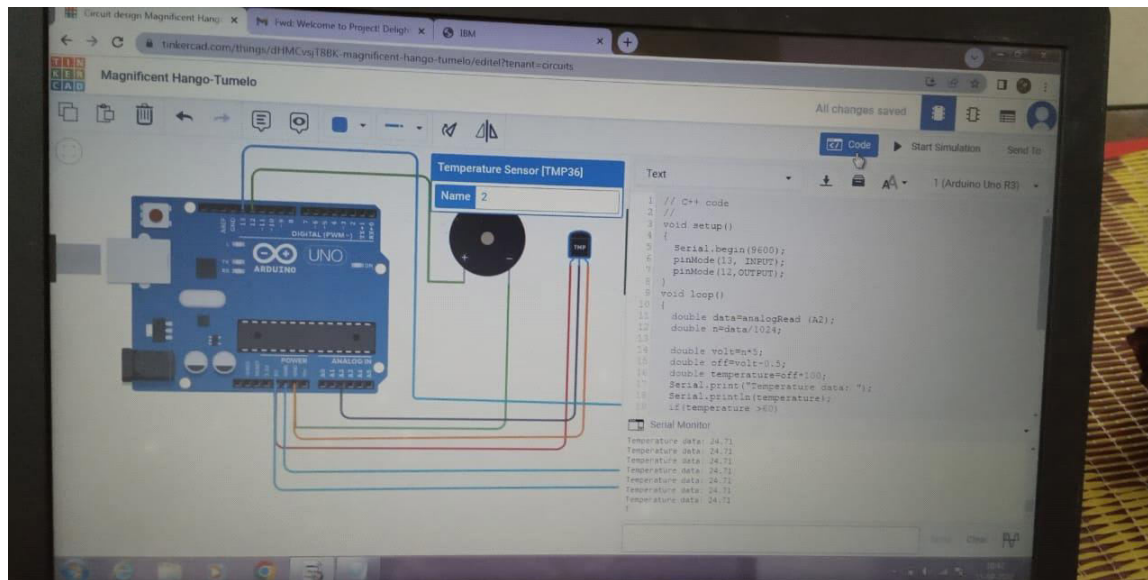


Fig.2.Circuit with an Code

Program:

//C++ code

void setup()

{

Serial.begin(9600);

pinMode(13,INPUT);

pinMode(12,OUTPUT);

}

void loop()

{

double data=analogRead (A2);

double n=data/1024;

```
double volt=n*5;
double off=volt-0.5;
double temperature=off*100;
Serial.print("Temperature data: ");
Serial.println(temperature);
if(temperature >60)
{
    tone (12,250);
    delay(500);//Wait for 1000 millisecond(s)
    noTone(12);
}
int motion=digitalRead(13);
if (motion==1)
{
    Serial.println("Motion detected");
    tone (12,100);
    delay(1000);//Wait for 1000 millisecond(s)
    noTone(12);
}
}
```

