

ASSIGNMENT NO : 1

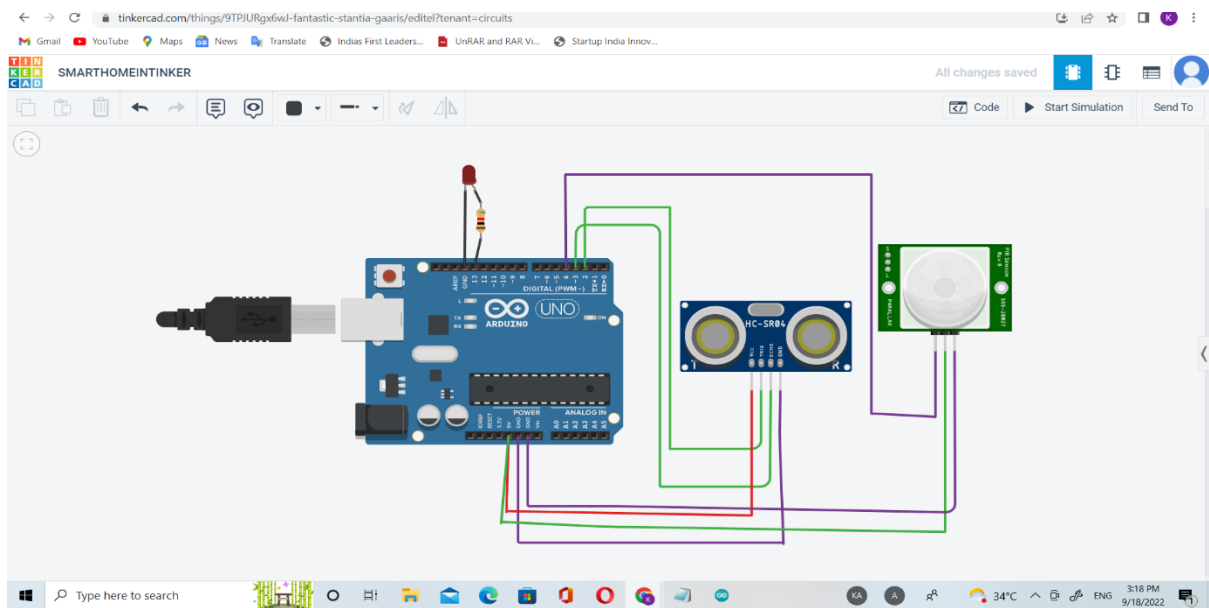
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TOPIC : SMART HOME



TINKER CAD

CODE:

```
int trigger_pin=2;
```

```
int echo_pin=3;
```

```
int time;
```

```
int distance;
```

```
void setup()
```

```
{
```

```
  Serial.begin(9600);
```

```
  pinMode(trigger_pin,OUTPUT);
```

```
pinMode(echo_pin,INPUT);
pinMode(4,INPUT);
pinMode(13,OUTPUT);
}
void loop()
{
  digitalWrite(trigger_pin,HIGH);
  delayMicroseconds(10);
  digitalWrite(trigger_pin,LOW);
  time=pulseIn(echo_pin,HIGH);
  distance=(time*0.034)/2;
  if(distance<=10)
  {
    Serial.println("Door open");
    Serial.print("Distance=");
    Serial.println(distance);
    delay(500);
  }
  else{
    Serial.println("Door closed");
    Serial.print("Distance=");
    Serial.println(distance);
    delay(500);
    int p=digitalRead(4);
    if(p)
```

```
{  
    digitalWrite(13,HIGH);  
    Serial.println("motion detected");  
}  
else  
{  
    digitalWrite(13,LOW);  
    Serial.println("not detected");  
}  
}  
}
```