SMARTBRIDGE EXTERNSHIP

Internet Of Things

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ASSIGNMENT-01

In Wokwi, if the distance is less than 100 cms for ultrasonic sensor, glow a LED

CODE:

```cpp
int t = 3;
int e = 2;
void setup()
{
  Serial.begin(9600);
  pinMode(LED_BUILTIN, OUTPUT);
  pinMode(t,OUTPUT);
  pinMode(e,INPUT);
}

float readDistanceCM() {
  digitalWrite(t, LOW);
  delayMicroseconds(2);
  digitalWrite(t, HIGH);
  delayMicroseconds(10);
  digitalWrite(t, LOW);
  int duration = pulseIn(e, HIGH);
  return duration * 0.034 / 2;
}

void loop() {
  float distance = readDistanceCM();

  bool isNearby = distance < 100;
  digitalWrite(LED_BUILTIN, isNearby);

  Serial.print("Measured distance: ");
  Serial.println(readDistanceCM());

  delay(100);
}
```
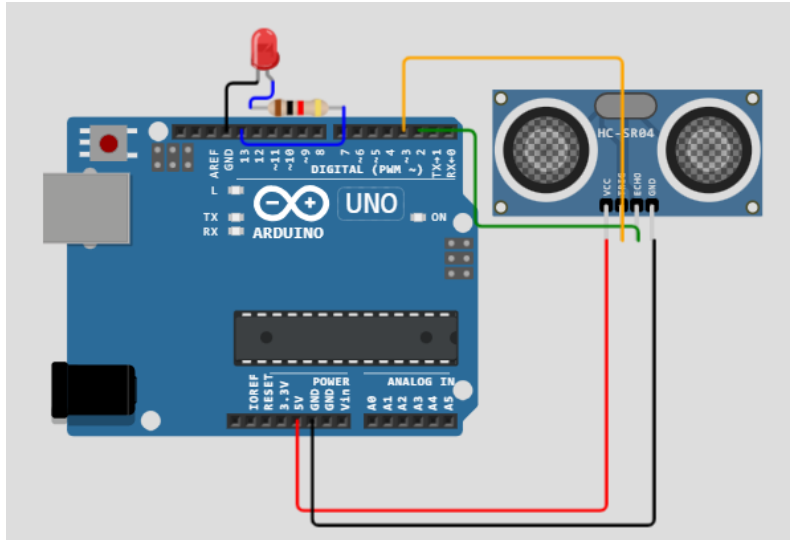
CIRCUIT:


```
Measured distance: 395.25
Measured distance: 89.74
Measured distance: 89.83
Measured distance: 89.84
Measured distance: 89.84
Measured distance: 89.74
```

LINK:

Assignment-01_iot project.zip