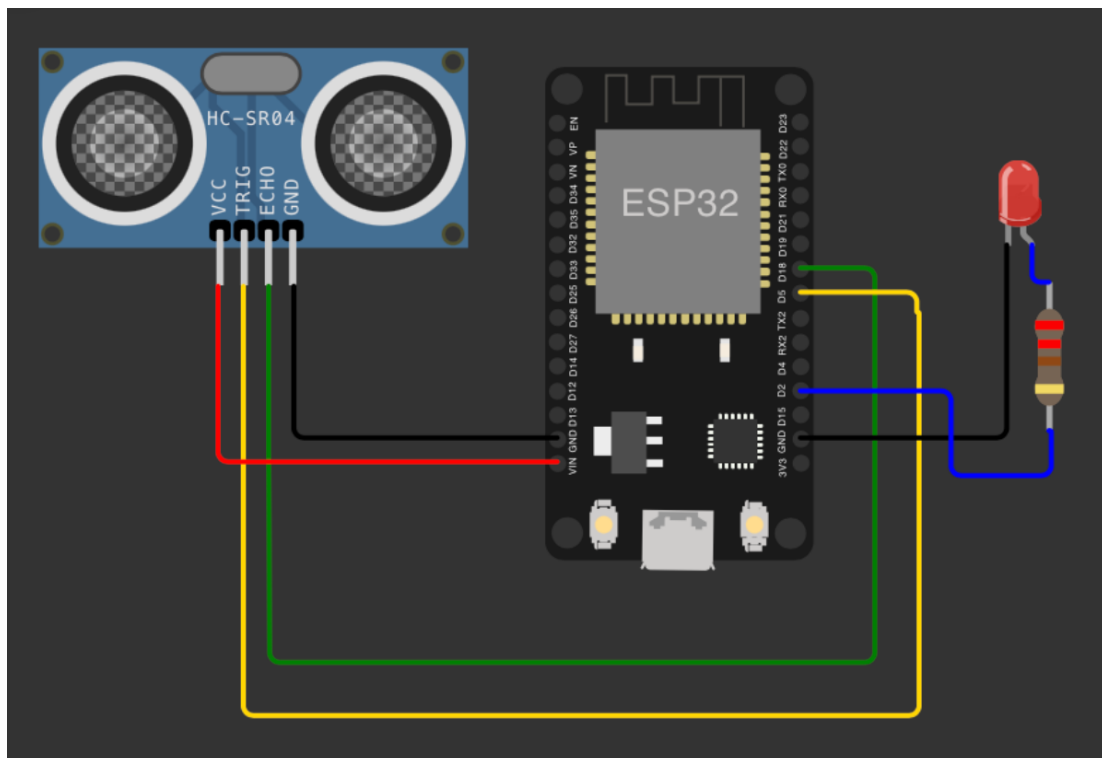


SMARTBRIDGE IoT

ASSIGNMENT-1

AIM: In Wokwi, if the distance is less than 100 cm for the ultrasonic sensor, glow a LED.

SCREENSHOT OF CIRCUIT:



CODE USED:

```
int trig = 5;
int echo = 18;

void setup()
{
  Serial.begin(9600);
  pinMode(trig,OUTPUT);
  pinMode(echo,INPUT);
  pinMode(2,OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
    digitalWrite(trig,LOW);
```

```
    digitalWrite(trig,HIGH);
```

```
    delayMicroseconds(10);
```

```
    digitalWrite(trig,LOW);
```

```
    float dur = pulseIn(echo,HIGH);
```

```
    float dis = (dur*0.0343)/2;
```

```
    if (dis < 100)
```

```
        digitalWrite(2,HIGH);
```

```
    else
```

```
        digitalWrite(2,LOW);
```

```
    Serial.print("Distance in cm: ");
```

```
    Serial.println(dis);
```

```
}
```

```
int trig = 5;
```

```
int echo = 18;
```

```
void setup()
```

```
{
```

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

```
    pinMode(trig,OUTPUT);
```

```
    pinMode(echo,INPUT);
```

```
    pinMode(2,OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
    digitalWrite(trig,LOW);
```

```
    digitalWrite(trig,HIGH);
```

```
    delayMicroseconds(10);
```

```
    digitalWrite(trig,LOW);
```

```
    float dur = pulseIn(echo,HIGH);
```

```
    float dis = (dur*0.0343)/2;
```

```
    if (dis < 100)
```

```
        digitalWrite(2,HIGH);
```

```
    else
```

```
        digitalWrite(2,LOW);
```

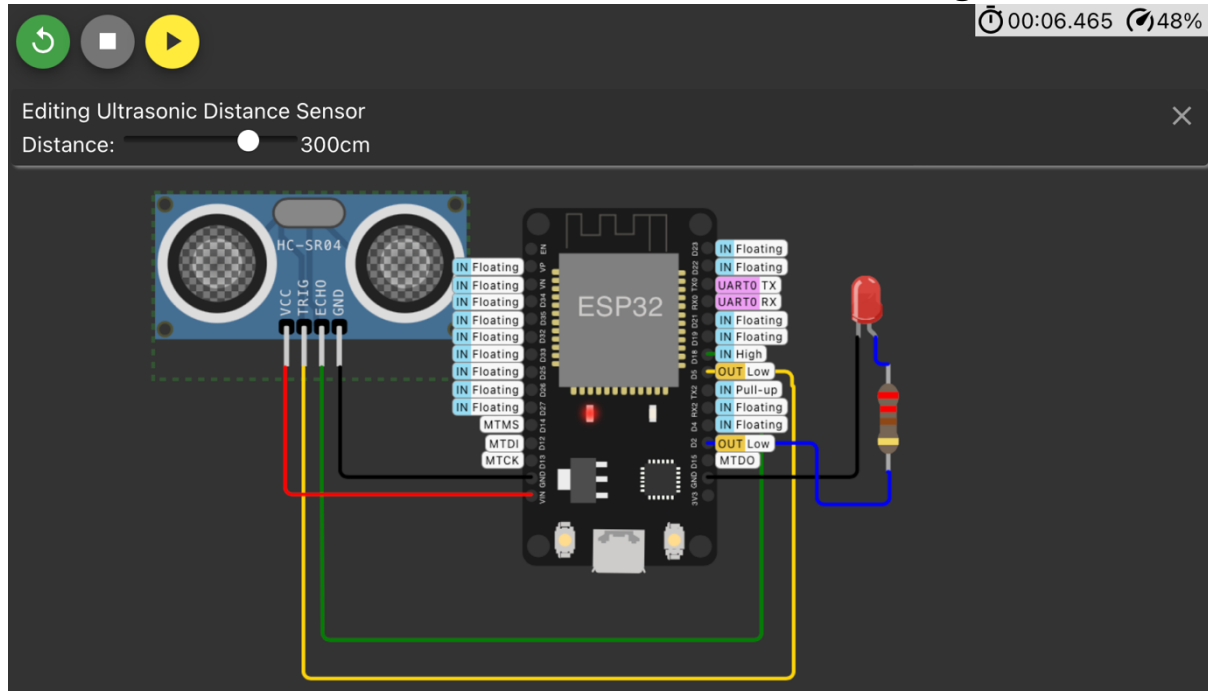
```
    Serial.print("Distance in cm: ");
```

```
    Serial.println(dis);
```

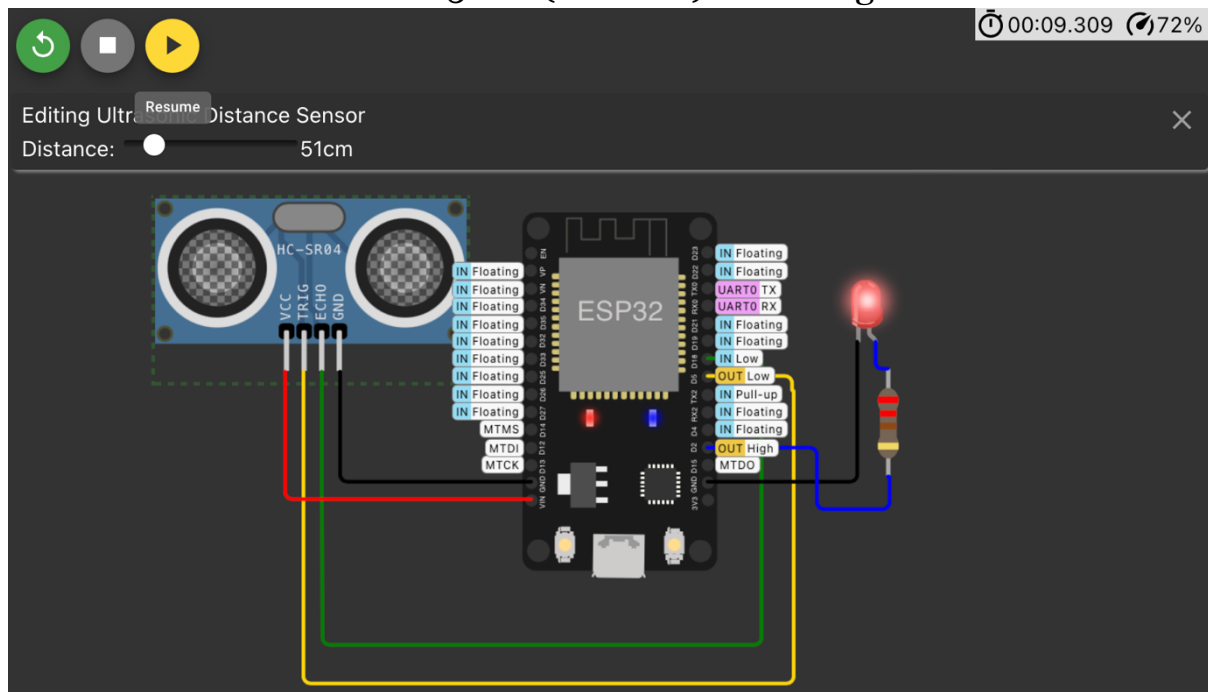
```
}
```

OUTPUT SCREENSHOTS:

distance = 300cm ($>100\text{cm}$) \Rightarrow LED does not glow



distance = 51cm ($<100\text{cm}$) \Rightarrow LED glows



SCREENSHOT OF WOKWI WORKSPACE: