Task 1

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Aim:

Simulating an UltraSonic Sensor along with a LED. The condition is when the distance of an object is less than 100cm from the UltraSonic Sensor, then the LED glows.

Share Link (Wokwi):

https://wokwi.com/projects/365264279943916545
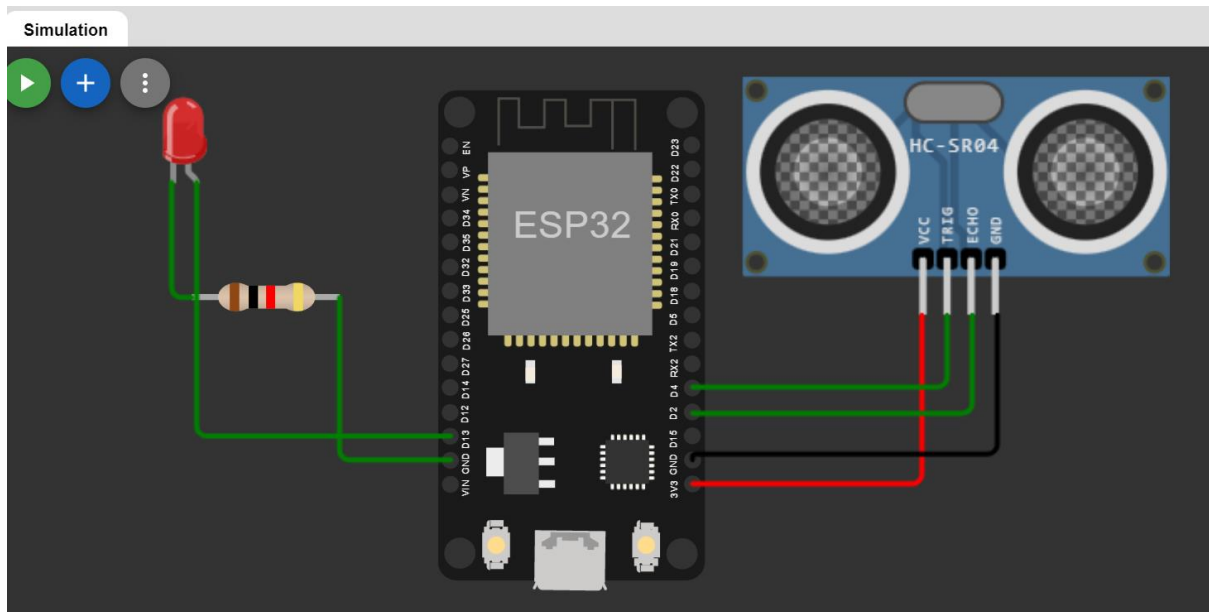
sketch.ino:

```cpp
int led=13;
int trig=4;
int echo=2;
void setup()
{
  pinMode(led,OUTPUT);
  pinMode(trig,OUTPUT);
  pinMode(echo, INPUT);
  Serial.begin(115200);
}
void loop()
{
  digitalWrite(led,LOW);
  digitalWrite(trig,LOW);
  digitalWrite(trig,HIGH);
  delayMicroseconds(10);
  digitalWrite(trig,LOW);

  float duration=pulseIn(echo,HIGH);
  float distance=(duration/2)*0.0343;

  if(distance<100)
  {
    digitalWrite(led,HIGH);
  }
}
```

Simulation:

Performed by –

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