**Assignment -4**

Program:

#define ECHO\_PIN 2

#define TRIG\_PIN 3

void setup() {

**Serial**.begin(115200);

  pinMode(LED\_BUILTIN, OUTPUT);

  pinMode(TRIG\_PIN, OUTPUT);

  pinMode(ECHO\_PIN, INPUT);

}

float readDistanceCM() {

  digitalWrite(TRIG\_PIN, LOW);

  delayMicroseconds(2);

  digitalWrite(TRIG\_PIN, HIGH);

  delayMicroseconds(10);

  digitalWrite(TRIG\_PIN, LOW);

  int duration = pulseIn(ECHO\_PIN, 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);

}

**OUTPUT:**

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