Obstacle Avoiding Robot

A robot that avoids obstacles using ultrasonic sensors.

Components:

- Arduino UNO

- Ultrasonic sensor

- Motor driver L298N

- Chassis + Wheels

Code will be uploaded using Arduino IDE.

Connections:

- HC-SR04 to D2 and D3

- Motors via L298N

Thank you!

Arduino Code:

```
#define trigPin 2
#define echoPin 3
#define motor1 5
#define motor2 6

void setup() {
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  pinMode(motor1, OUTPUT);
  pinMode(motor2, OUTPUT);
  Serial.begin(9600);
}

void loop() {
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
```

```
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);

  long duration = pulseIn(echoPin, HIGH);
  long distance = duration * 0.034 / 2;

  if (distance < 15) {
    digitalWrite(motor1, LOW);
    digitalWrite(motor2, LOW);
  } else {
    digitalWrite(motor1, HIGH);
    digitalWrite(motor2, HIGH);
  }
  delay(200);
}
```