IoT

Project Name: **Smart Breaking System**

Group Member Roll no's: **22MCA005,009,021.**

Source Code:

```
#include <HCSR04.h>
UltraSonicDistanceSensor ultrasonic(A0,A1);
float distance;
// left motor
int leftMotorSpeedPin = 3;
int leftMotorForwardPin = 4;
int leftMotorBackwardPin = 5;
int led=9;
// right motor
int rightMotorSpeedPin = 11;
int rightMotorForwardPin = 12;
int rightMotorBackwardPin = 13;
//int speed=255;
//int speed1=50;
void setup() {
pinMode(leftMotorSpeedPin, OUTPUT);
pinMode(leftMotorForwardPin, OUTPUT);
pinMode(leftMotorBackwardPin, OUTPUT);
pinMode(rightMotorSpeedPin, OUTPUT);
pinMode(rightMotorForwardPin, OUTPUT);
pinMode(rightMotorBackwardPin, OUTPUT);
Serial.begin(9600);
pinMode(led, OUTPUT);
```

```
}
void loop() {
distance = ultrasonic.measureDistanceCm(); //Use 'CM' for centimeters or 'INC' for
inches
Serial.println(distance);
if (distance > 35 && distance < 50)
{
slow();
Serial.println("apply break");
digitalWrite(led, HIGH);
delay(500);
digitalWrite(led, LOW);
delay(500);
digitalWrite(led, HIGH);
delay(500);
digitalWrite(led, LOW);
delay(500);
}
else if (distance<35)
{
stop();
Serial.println("stop");
digitalWrite(led, HIGH);
delay(1000);
}
else
{
goForward();
Serial.println("go");
digitalWrite(led, LOW);
}
```

```
}
void goForward() {
digitalWrite(leftMotorSpeedPin, HIGH);
digitalWrite(rightMotorSpeedPin, HIGH);
digitalWrite(leftMotorForwardPin, HIGH);
digitalWrite(leftMotorBackwardPin, LOW);
digitalWrite(rightMotorForwardPin, HIGH);
digitalWrite(rightMotorBackwardPin, LOW);
}
void slow() {
analogWrite(leftMotorSpeedPin, 100);
analogWrite(rightMotorSpeedPin, 100);
digitalWrite(leftMotorForwardPin, HIGH);
digitalWrite(leftMotorBackwardPin, LOW);
digitalWrite(rightMotorForwardPin, HIGH);
digitalWrite(rightMotorBackwardPin, LOW);
//digitalWrite(rightMotorSpeedPin
//digitalWrite(rightMotorForwardPin, LOW);
//digitalWrite(rightMotorBackwardPin, HIGH);
}
void stop() {
//digitalWrite(leftMotorSpeedPin, LOW);
//digitalWrite(rightMotorSpeedPin, LOW);
digitalWrite(leftMotorForwardPin, LOW);
digitalWrite(leftMotorBackwardPin, LOW);
digitalWrite(rightMotorForwardPin, LOW);
digitalWrite(rightMotorBackwardPin, LOW);
}
```