**Arduino Code**

//#include <SoftwareSerial.h>

//#define TxD 1

//#define RxD 0

//SoftwareSerial bluetoothSerial(TxD, RxD);

char t;

int ledpin = 13; // LED for flame alert

int flamesensorpin1 = 5; // front

int flamesensorpin2 = 6; // right

int flamesensorpin3 = 7; // left

int flamepin1 = HIGH;

int flamepin2 = HIGH;

int flamepin3 = HIGH;

#define USE\_BLUETOOTH false // change to true if using HC-05/06

// Motor control pins

int m1a = 8;

int m1b = 12;

int m2a = 10;

int m2b = 11;

void moveMotors(int a, int b, int c, int d) {

digitalWrite(m1a, a);

digitalWrite(m1b, b);

digitalWrite(m2a, c);

digitalWrite(m2b, d);

}

void setup() {

//if (USE\_BLUETOOTH) bluetoothSerial.begin(9600);

//else Serial.begin(9600);

Serial.begin(9600);

pinMode(ledpin, OUTPUT); // LED output

pinMode(m1a, OUTPUT);

pinMode(m1b, OUTPUT);

pinMode(m2a, OUTPUT);

pinMode(m2b, OUTPUT);

pinMode(flamesensorpin1, INPUT);

pinMode(flamesensorpin2, INPUT);

pinMode(flamesensorpin3, INPUT);

}

void loop() {

digitalWrite(ledpin, LOW); // default LED off

// Read from control source

if (USE\_BLUETOOTH) {

//if (bluetoothSerial.available()) t = bluetoothSerial.read();

} else {

if (Serial.available()) {

t = Serial.read();

Serial.println(t);

}

}

// Movement control

if (t == 'f') { // Forward

moveMotors(HIGH, LOW, HIGH, LOW);

Serial.println("Forward");

}

else if (t == 'b') { // Backward

moveMotors(LOW, HIGH, LOW, HIGH);

Serial.println("Backward");

}

else if (t == 'r') { // Left

moveMotors(LOW, HIGH, HIGH, LOW);

Serial.println("Left");

delay(300);

t = 's';

}

else if (t == 'l') { // Right

moveMotors(HIGH, LOW, LOW, HIGH);

Serial.println("Right");

delay(300);

t = 's';

}

else if (t == 's') { // Stop

moveMotors(LOW, LOW, LOW, LOW);

}

// Read flame sensors

flamepin1 = digitalRead(flamesensorpin1);

flamepin2 = digitalRead(flamesensorpin2);

flamepin3 = digitalRead(flamesensorpin3);

// Flame detection messages + LED alert

if (flamepin1 == LOW) {

Serial.println("FLAME On FRONT");

}

if (flamepin2 == LOW) {

Serial.println("FLAME On Right");

}

if (flamepin3 == LOW) {

Serial.println("FLAME On Left");

}

if (flamepin1 == LOW || flamepin2 == LOW || flamepin3 == LOW) {

digitalWrite(ledpin, HIGH); // turn on LED alert

} else {

digitalWrite(ledpin, LOW);

}

}