IR Sensor

void setup()

{

// put your setup code here, to run once:

pinMode(4,INPUT);

pinMode(12,OUTPUT);//LED

}

void loop()

{

// put your main code here, to run repeatedly:

if(digitalRead(4)==LOW){

digitalWrite(12,HIGH);

}

else{

digitalWrite(12,LOW);

}

}

**Automatic Door Bell**

int trigPin = 12;

int echoPin = 11 ;

int buzzer = 4;

// Now defines variables

long duration ;

int distance ;

void setup()

{

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode (buzzer, OUTPUT);

Serial.begin (9600);

}

void loop()

{

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(5);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH);

// Calculating the distance

distance = duration\*0.034/2;

//distance = (duration / 2) / 29.1;

if (distance < 150)

{

digitalWrite(buzzer, HIGH);

}

else {

digitalWrite (buzzer,LOW);

}

delay(750);

}

**Bluetooth Controlled Home Automation**

char data = 0;

void setup()

{

Serial.begin(9600);

pinMode(8, OUTPUT);

pinMode(9, OUTPUT);

pinMode(10, OUTPUT);

pinMode(11, OUTPUT);

}

void loop()

{

if(Serial.available() > 0)

{

data = Serial.read();

Serial.print(data);

Serial.print("\n");

if(data == 'a')

digitalWrite(8, HIGH);

else if(data == 'b')

digitalWrite(8, LOW);

if(data == 'c')

digitalWrite(9, HIGH);

else if(data == 'd')

digitalWrite(9, LOW);

if(data == 'e')

digitalWrite(10, HIGH);

else if(data == 'f')

digitalWrite(10, LOW);

if(data == 'g')

digitalWrite(11, HIGH);

else if(data == 'h')

digitalWrite(11, LOW);

}

}

Bluetooth Controlled Robot

#include<SoftwareSerial.h>

#define IN1 12

#define IN2 11

#define IN3 10

#define IN4 9

SoftwareSerial mySerial(2, 3);

// RX, TX

String data;

int btVal;

void setup()

{

pinMode(IN1, OUTPUT);

pinMode(IN2, OUTPUT);

pinMode(IN3, OUTPUT);

pinMode(IN4, OUTPUT);

digitalWrite(IN1, LOW);

digitalWrite(IN2, LOW);

digitalWrite(IN3, LOW);

digitalWrite(IN4, LOW);

mySerial.begin(9600);

}

void loop()

{

while (mySerial.available())

{

{

data = mySerial.readStringUntil('\n');

}

btVal = (data.toInt());

switch (btVal)

{

case 1:

//Serial.println("Forward");

forward();

break;

case 2:

//Serial.println("Reverse");

reverse();

break;

case 3:

//Serial.println("Left");

left();

break;

case 4:

//Serial.println("Right");

right();

break;

case 5:

//Serial.println("Stop");

stoprobot();

break;

}

}

if (mySerial.available() < 0)

{

//Serial.println("No Bluetooth Data ");

}

}

void forward()

{

digitalWrite(IN1, HIGH);

digitalWrite(IN2, LOW);

digitalWrite(IN3, HIGH);

digitalWrite(IN4, LOW);

}

void reverse()

{

digitalWrite(IN1, LOW);

digitalWrite(IN2, HIGH);

digitalWrite(IN3, LOW);

digitalWrite(IN4, HIGH);

}

void left()

{

digitalWrite(IN1, LOW);

digitalWrite(IN2, LOW);

digitalWrite(IN3, HIGH);

digitalWrite(IN4, LOW);

}

void right()

{

digitalWrite(IN1, HIGH);

digitalWrite(IN2, LOW);

digitalWrite(IN3, LOW);

digitalWrite(IN4, LOW);

}

void stoprobot()

{

digitalWrite(IN1, LOW);

digitalWrite(IN2, LOW);

digitalWrite(IN3, LOW);

digitalWrite(IN4, LOW);

}