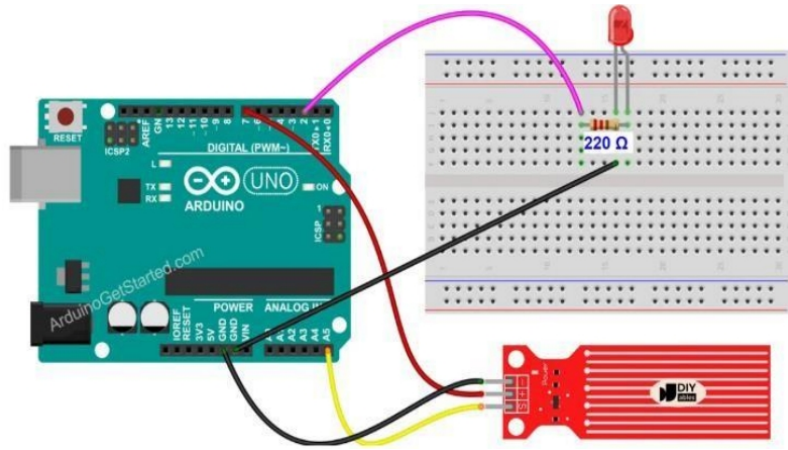


```
void setup()
{
  pinMode(2, OUTPUT);
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
  pinMode(5, OUTPUT);
  pinMode(6, OUTPUT);
  pinMode(7, OUTPUT);
  pinMode(8, OUTPUT);
  pinMode(9, OUTPUT);
}

void loop()
{
  // to display ZERO
  digitalWrite(2, LOW);
  digitalWrite(3, HIGH);
  digitalWrite(4, HIGH);
  digitalWrite(5, HIGH);
  digitalWrite(6, HIGH);
  digitalWrite(7, HIGH);
  digitalWrite(8, HIGH);
  digitalWrite(9, LOW);
  delay(1000); // Wait for 1000 millisecond(s)
}
```



```
#define LED_PIN 2
#define water_sensor 7
#define SIGNAL_PIN A5
#define THRESHOLD 300
```

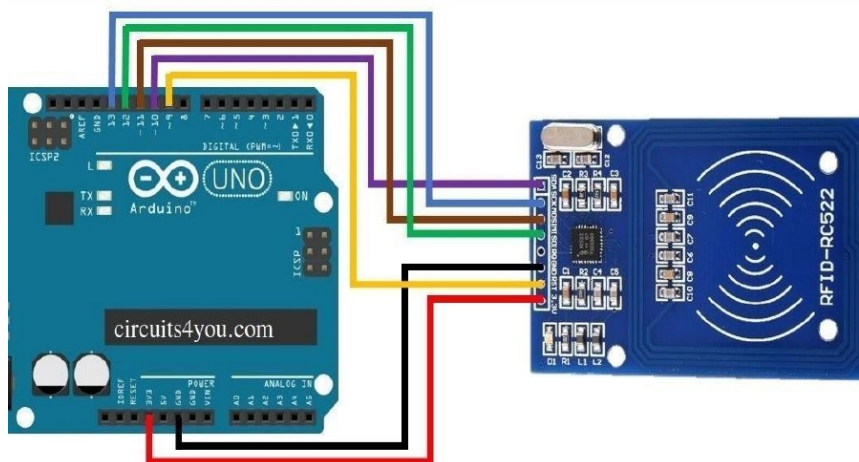
```
int value = 0;
```

```
void setup() {
  Serial.begin(9600);
  pinMode(LED_PIN, OUTPUT);
  pinMode(water_sensor, INPUT);
  pinMode(SIGNAL_PIN, INPUT);
  digitalWrite(LED_PIN, LOW);
}
```

```
void loop() {
  value = analogRead(SIGNAL_PIN);
  Serial.print("The water level is: ");
  Serial.println(value);
```

```
  if (value > THRESHOLD) {
    Serial.println("Water is detected");
    digitalWrite(LED_PIN, HIGH);
  } else {
    digitalWrite(LED_PIN, LOW);
  }
```

```
  delay(1000);
}
```



SDA pin is connected to digital pin 10 of Arduino Uno  
 SCK pin is connected to digital pin 13 of Arduino Uno  
 MOSI pin is connected to digital pin 11 of Arduino Uno  
 MISO pin is connected to digital pin 12 of Arduino Uno  
 IRQ Not Connected  
 GND is connected to GND of Arduino Uno  
 RST is connected to digital pin 9 of Arduino Uno  
 3.3 V is connected to 3.3 Volts of Arduino Uno

```
#include <SPI.h>
#include <MFRC522.h>
```

```

#define RST_PIN 9
#define SS_PIN 10

MFRC522 mfrc522(SS_PIN, RST_PIN);

void setup() {
  Serial.begin(9600);
  while (!Serial);
  SPI.begin();
  mfrc522.PCD_Init();
  delay(4);
  mfrc522.PCD_DumpVersionToSerial();
  Serial.println(F("Scan PICC to see UID, SAK, type, and data blocks"));
}

void loop() {
  if (!mfrc522.PICC_IsNewCardPresent()) {
    return;
  }

  if (!mfrc522.PICC_ReadCardSerial()) {
    return;
  }

  mfrc522.PICC_DumpToSerial(&(mfrc522.uid));
}

```

---

```

const int trigPin = 7;
const int echoPin = 8;
void setup() {
  Serial.begin(9600);
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
}
void loop() {
  long duration, inches, cm;
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);
  inches = microsecondsToInches(duration);
  cm = microsecondsToCentimeters(duration);
  // The data has to be fed in this format so that it will be stored in MySQL
  Serial.print("{\"inches\":");
  Serial.print(inches);
  // The data has to be fed in this format so that it will be stored in MySQL
  Serial.print(",\"cm\":");
  Serial.print(cm);
  Serial.println("}")
  delay(1000);
}
long microsecondsToInches(long microseconds) {
  return microseconds / 74 / 2;
}
long microsecondsToCentimeters(long microseconds) {
  return microseconds / 29 / 2;
}

```

---

```

var value = JSON.parse(JSON.stringify(msg.payload)); //converting string to
// JSON object
value = msg;
var sensor1 = msg.payload.inches; //adding value to the payload
var sensor2 = msg.payload.cm; //adding value to the payload
msg.payload = [sensor1, sensor2]; //adding value to the payload
msg.topic = 'INSERT INTO distance(inches,cm) values (?,?)'; //query to insert
return msg;

```