

ASSIGNMENT 1

Gas Leakage monitoring

```
float vout1;
float temp;
int LED= 13;
int gasSensor;
int piezo=7;
void setup()
{ float vout;

  pinMode(Ao,INPUT);
  pinMode(A1,INPUT);
  pinMode(LED,INPUT);
  pinMode(piezo,OUTPUT);
  Serial.begin(9600);
}
void loop()
{
  vout=analogRead(A1) ;
  vout1=(vout/1023)*5000;
  temp=(vout1/10);
  gasSensor=analogRead(Ao);
  if(temp>=150)
  {
    digitalWrite(LED,LOW);
  }
  if (gasSensor>=80)
  {
    digitalWrite(piezo,HIGH);
  }
  else
  {
    digitalWrite(piezo,LOW);
  }
  Serial.print("Temperature in Degree Celsius = ");
  Serial.print(temp);
  Serial.println();
  Serial.print("gasSensor: ");
  Serial.println(gasSensor);
  delay(1000);
}
```

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CodeStart SimulationSend To

ComponentsBasic

Search

Resistor

LED

Pushbutton

Potentiometer

Capacitor

Slideswitch

9V Battery

Coin Cell 3V Battery

1.5V Battery

Breadboard Small

micro:bit

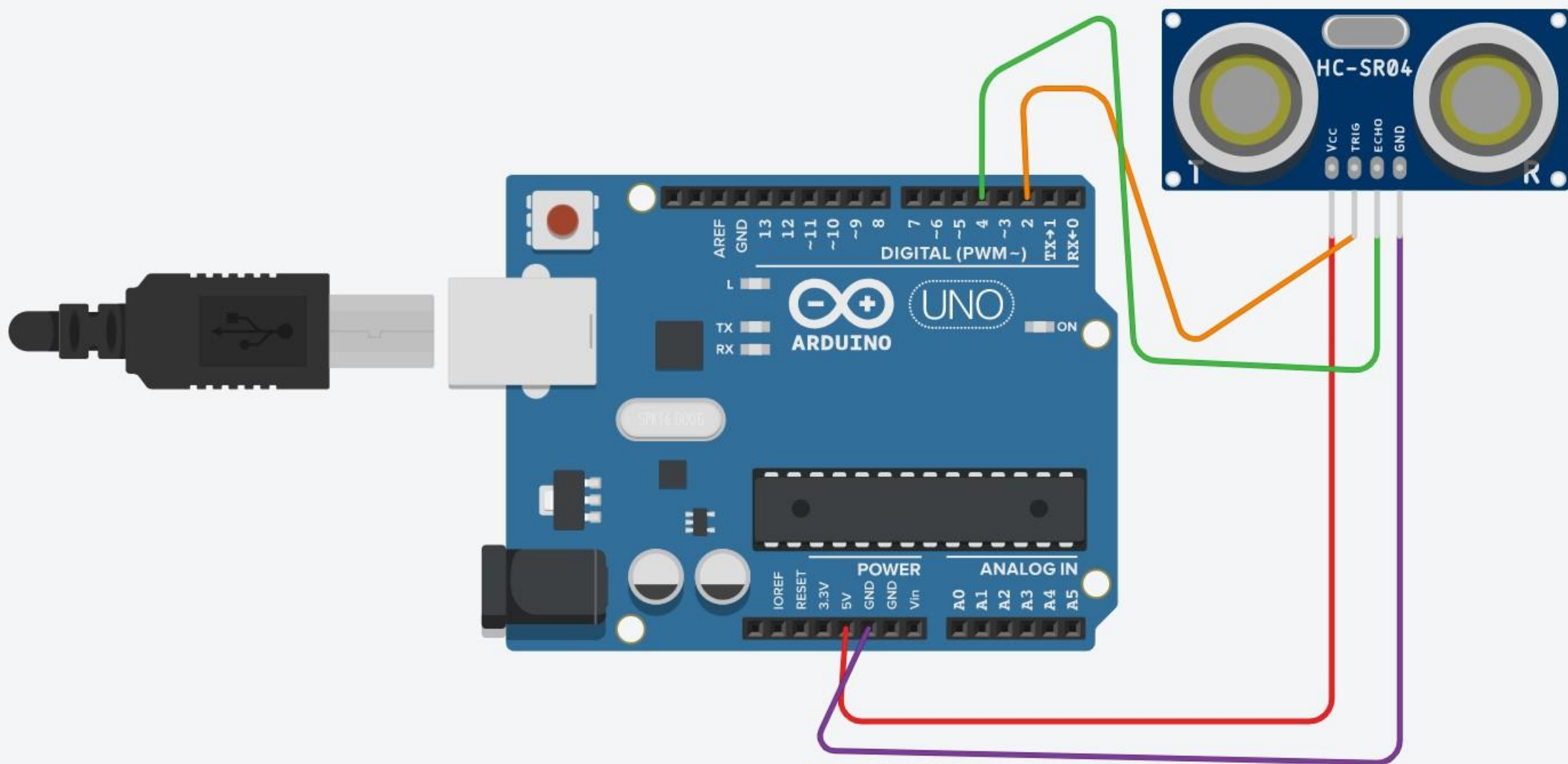
Arduino Uno R3

The diagram shows an Arduino Uno R3 board with the following connections:

- A USB Type-C cable is plugged into the USB port.
- A 9V battery is connected to the power pins: the positive terminal to the 5V pin and the negative terminal to a GND pin.
- A TMP sensor is connected to the digital pins: a green wire connects the sensor's signal pin to digital pin 2, and a yellow wire connects the sensor's ground pin to a GND pin on the power header.

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The screenshot shows the 'Components' menu in the Arduino IDE. The 'Basic' category is selected, displaying a grid of 12 electronic components. The components are arranged in a 4x3 grid. The first row contains a Resistor, LED, and Pushbutton. The second row contains a Potentiometer, Capacitor, and Slideswitch. The third row contains a 9V Battery, Coin Cell 3V Battery, and 1.5V Battery. The fourth row contains a Breadboard Small, micro:bit, and Arduino Uno R3. The 'Components' menu is open, and the 'Basic' category is selected. The 'Search' bar is visible at the top of the component list.

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CodeStart SimulationSend To

Components Basic

Search

ResistorLEDPushbutton

PotentiometerCapacitorSlideswitch

9V BatteryCoin Cell 3V Battery1.5V Battery

Breadboard Smallmicro:bitArduino Uno R3

The diagram shows an Arduino Uno microcontroller board with the following connections:

- A USB Type-C cable is plugged into the USB port.
- A pushbutton is connected to digital pin 2 (green wire) and digital pin 3 (green wire).
- A resistor is connected to digital pin 3 (red wire) and a common ground point (red wire).
- The ground pin of the pushbutton is connected to a common ground point (black wire).

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