 **Wiring the Water Sensor:**

* **VCC** pin of the water sensor to **5V** on the Raspberry Pi.
* **GND** pin of the water sensor to **Ground** on the Raspberry Pi.
* **OUT** pin of the water sensor to a **GPIO pin** (e.g., GPIO 22).

 **Wiring the LED:**

* **Anode** (long leg) of the LED to a **resistor** (220 ohms) and then to another **GPIO pin** (e.g., GPIO 27).
* **Cathode** (short leg) of the LED to **Ground** on the Raspberry Pi.

import RPi.GPIO as GPIO

import time

# Pin Definitions

water\_sensor\_pin = 22 # GPIO pin for the water sensor

led\_pin = 27 # GPIO pin for the LED

# GPIO setup

GPIO.setmode(GPIO.BCM) # Use BCM pin numbering

GPIO.setup(water\_sensor\_pin, GPIO.IN) # Water sensor as input

GPIO.setup(led\_pin, GPIO.OUT) # LED as output

try:

while True:

# Check if the water sensor detects water

if GPIO.input(water\_sensor\_pin):

print("Water detected")

GPIO.output(led\_pin, GPIO.HIGH) # Turn on the LED

else:

print("No water detected")

GPIO.output(led\_pin, GPIO.LOW) # Turn off the LED

# Delay to avoid excessive logging

time.sleep(0.5)

except KeyboardInterrupt:

print("Program stopped by user")

finally:

# Clean up GPIO settings

GPIO.cleanup()