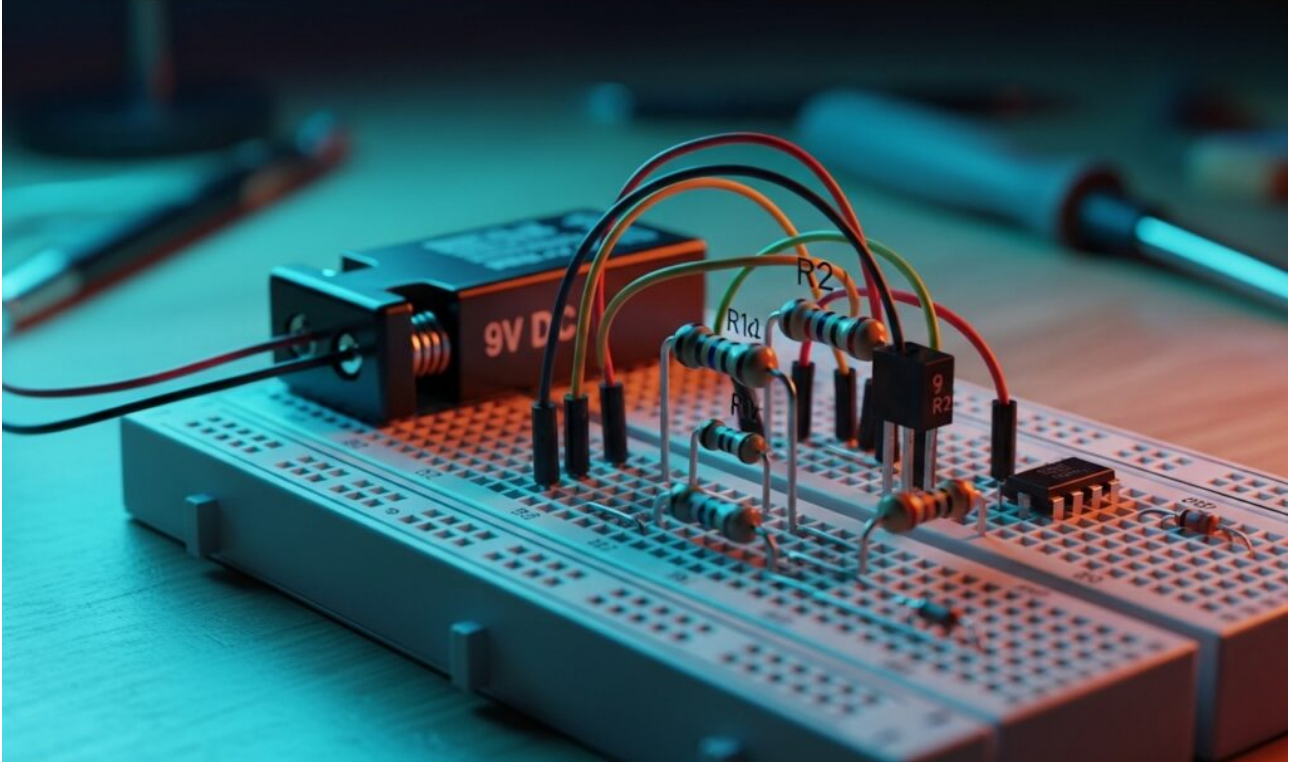


Practical case: Simple voltage divider

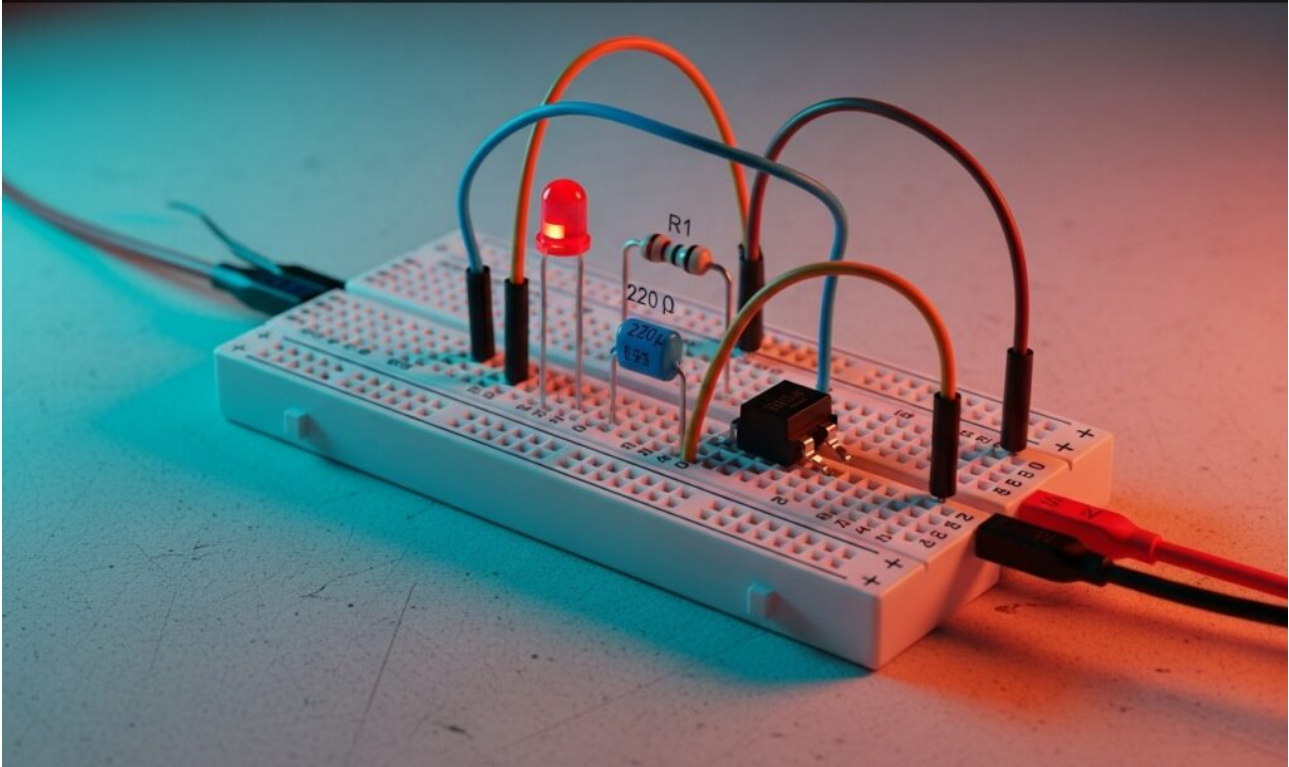
Simple voltage divider



Master Analog Electronics by building a voltage divider with a Resistor pair. Learn to step down 9V to 4.5V for sensor interfacing and verify the output ratio.

Practical case: Current limiting in an LED

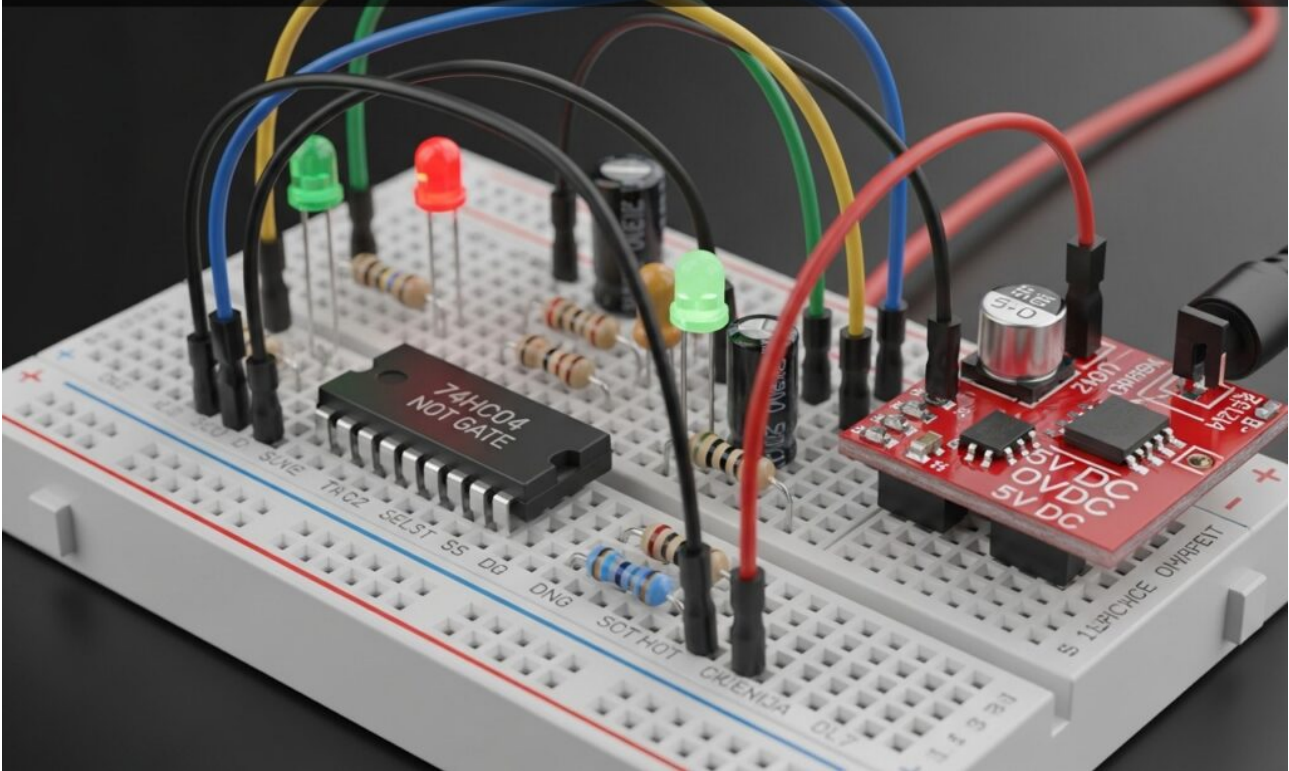
Current limiting in an LED



Master Analog Electronics basics by building a circuit where a Resistor protects an LED. Apply Ohm's Law to limit current and ensure safe, steady illumination.

Practical case: Empty Tank Level Indicator

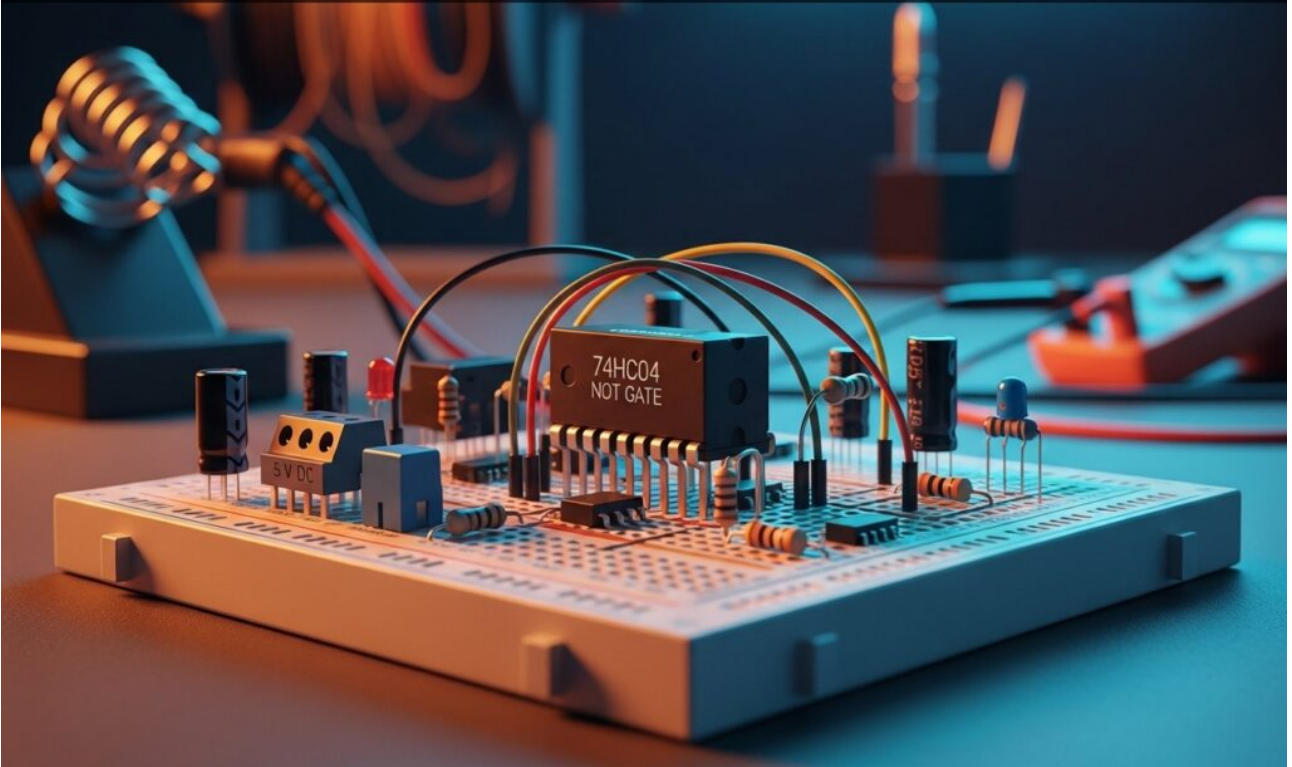
Empty Tank Level Indicator



Master Digital Electronics by building a water level alarm with a NOT gate. Design a circuit that lights an LED when tanks empty, preventing pump damage.

Practical case: Emergency deactivation

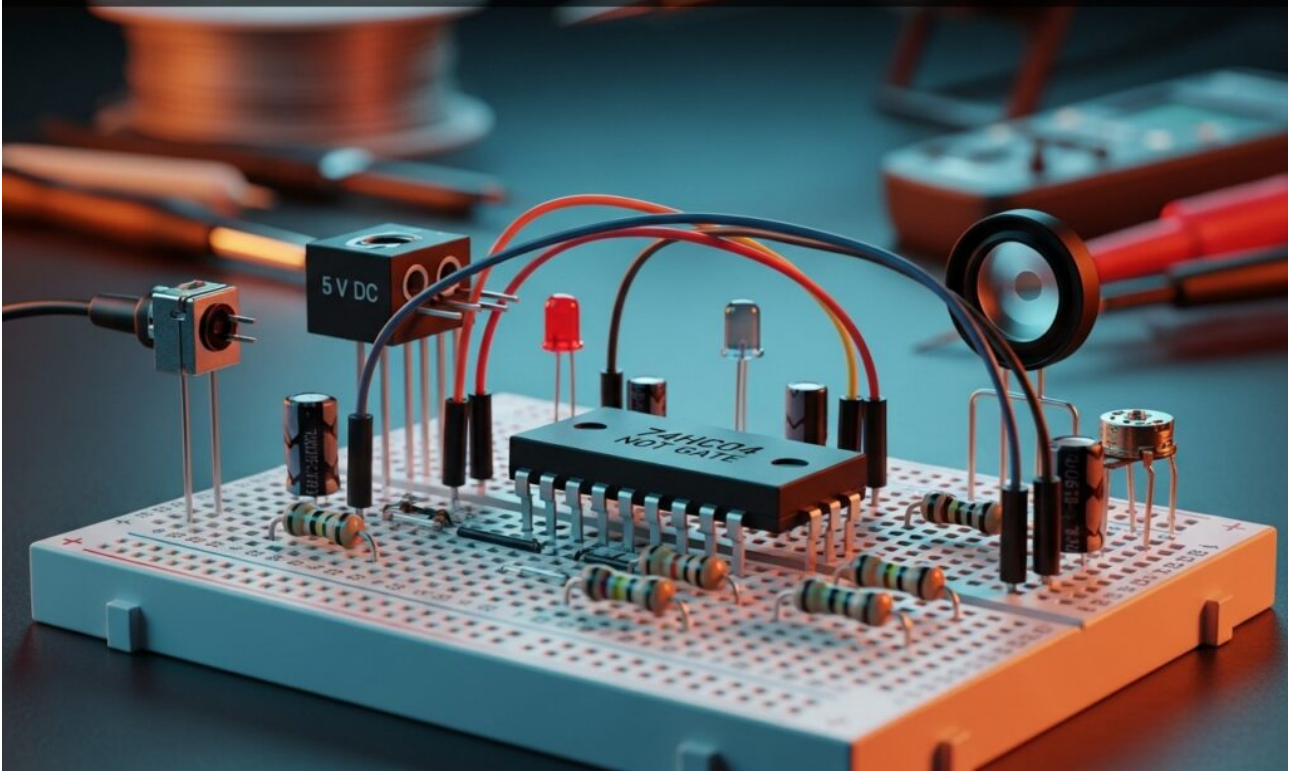
Emergency deactivation



Learn Digital Electronics by building a safety kill switch using a NOT gate. Create a circuit where pressing a button instantly cuts the Ready signal voltage.

Practical case: Automatic darkness sensor

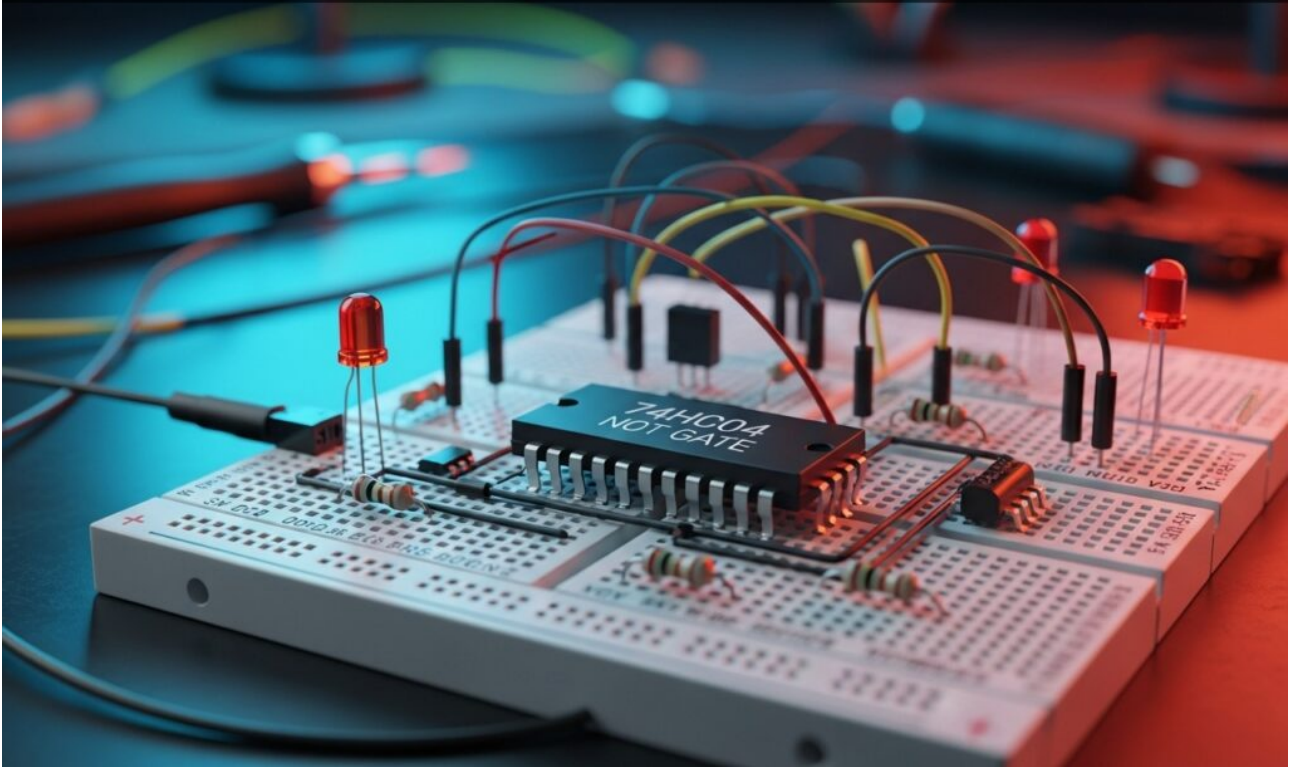
Automatic darkness sensor



Master Digital Electronics by building an automatic night light. Use a NOT gate and LDR to detect darkness and trigger an LED, learning practical sensor logic.

Practical case: Open door alarm

Open door alarm



Master Digital Electronics by building a security circuit with a NOT gate. Learn to trigger an LED warning signal instantly when a switch contact opens.