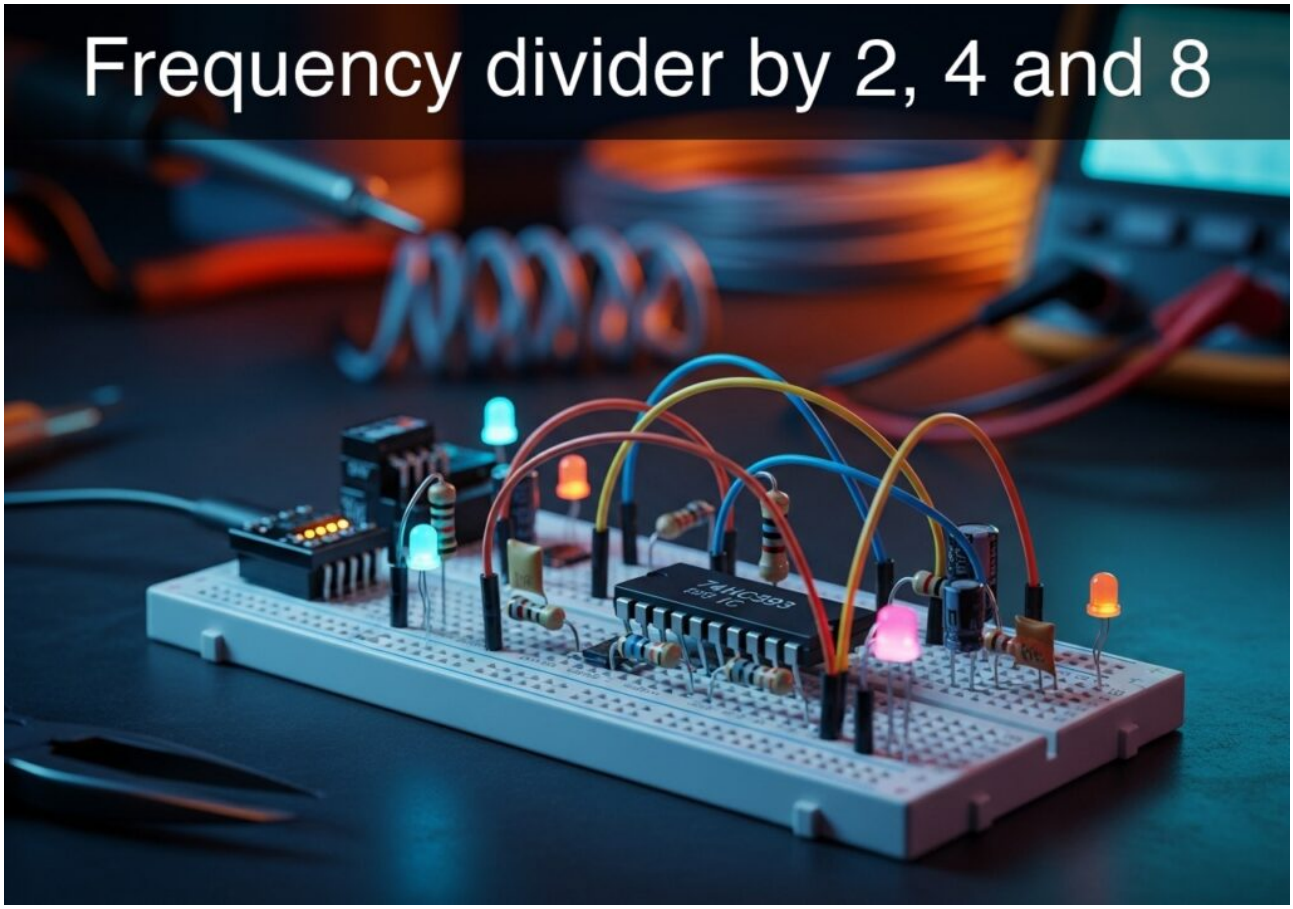
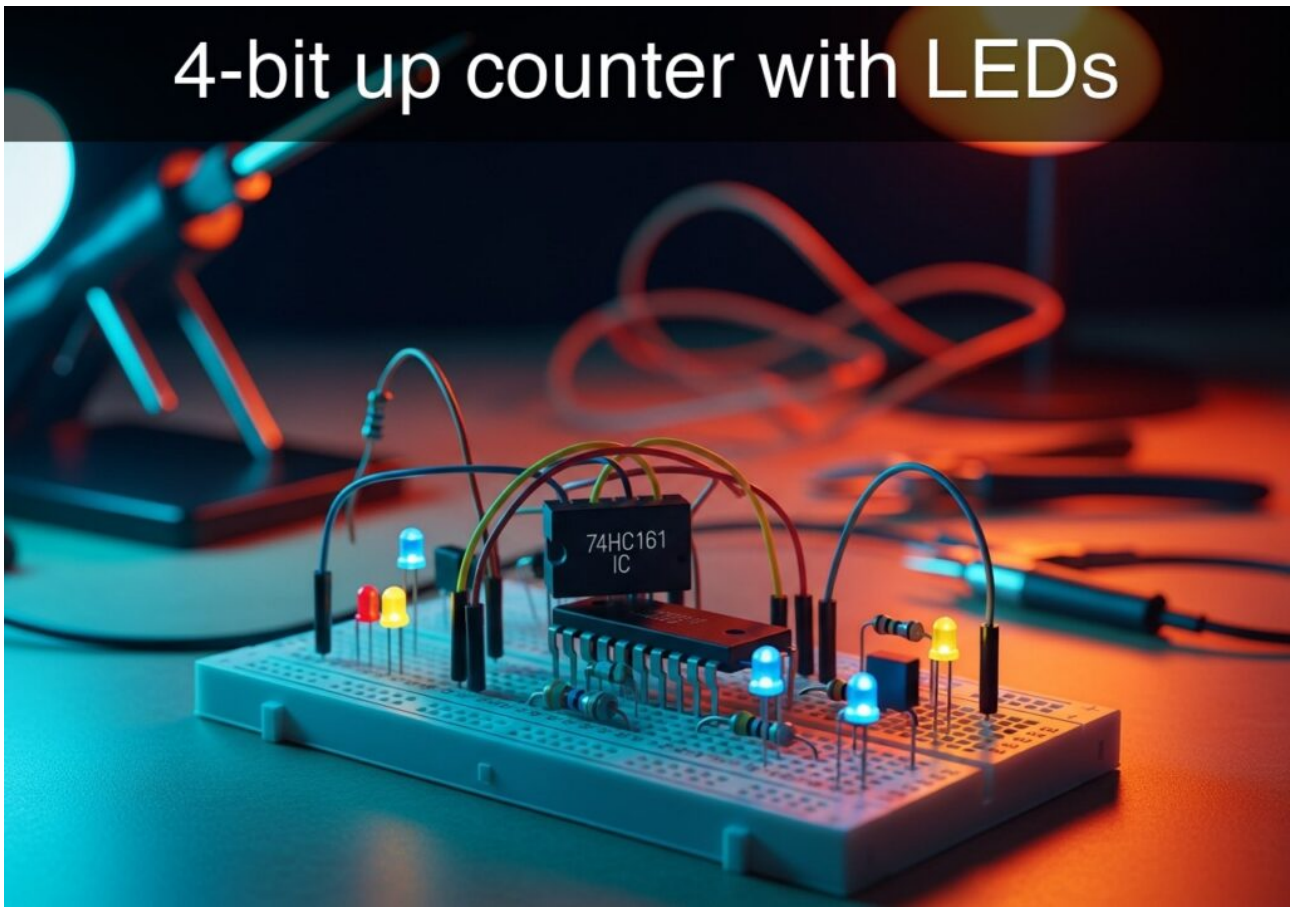
Practical case: Frequency divider by 2, 4 and 8



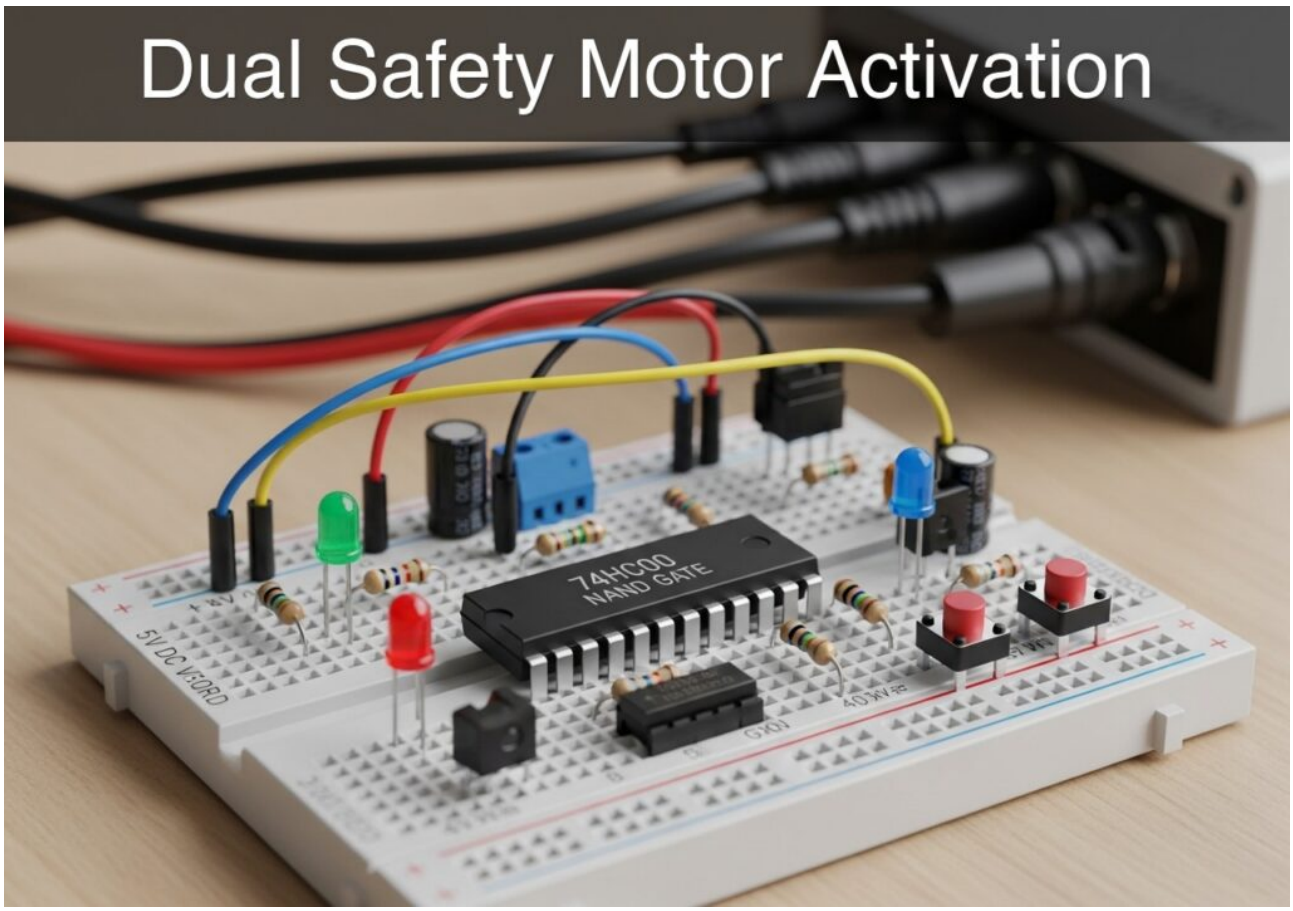
In this Digital Electronics lab, use a Binary counter to build a frequency divider. Verify square wave outputs at f/2, f/4, and f/8 relative to the clock.

Practical case: 4-bit up counter with LEDs



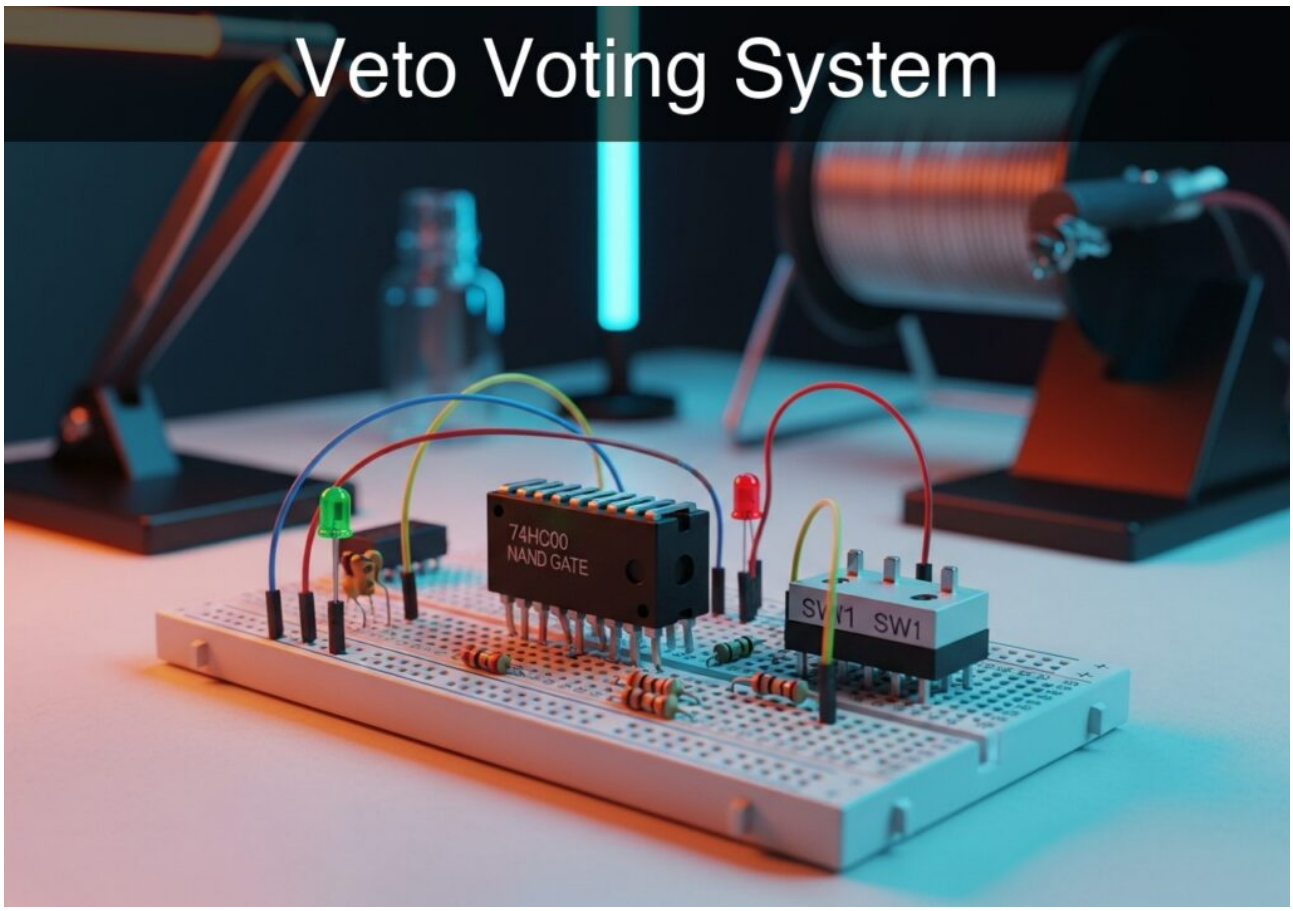
Build a practical Digital Electronics circuit with a Binary counter. Visualize the 0 to 15 sequence on LEDs and verify synchronous clock signals.

Practical case: Dual Safety Motor Activation



Learn Digital Electronics by building a safety circuit with a NAND gate. Create a two-hand motor control system that activates 5V output only on dual press.

Practical case: Veto Voting System

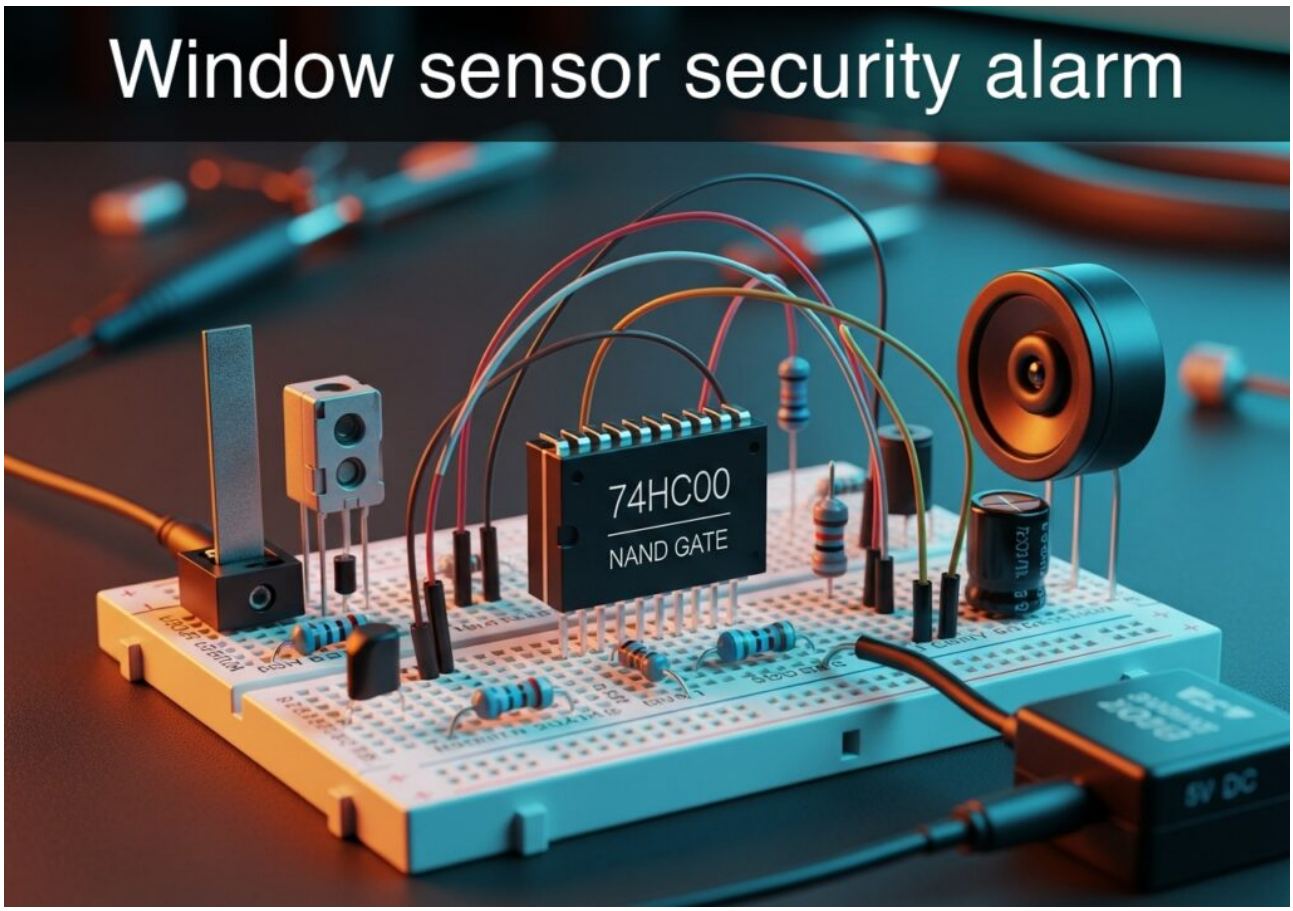


Master Digital Electronics by building a voting system using a single 74HC00 NAND gate IC. Create a safety interlock circuit where LED output signals approval.

Practical case: Water tank level control

Learn Digital Electronics by building a pump safety stop using a NAND gate. Design a circuit that cuts power to 0V only when two sensors detect a full tank.

Practical case: Window sensor security alarm



Master Digital Electronics by building a fail-safe alarm with a NAND gate. Detect open windows and trigger a 5V LED signal instantly when security is breached.