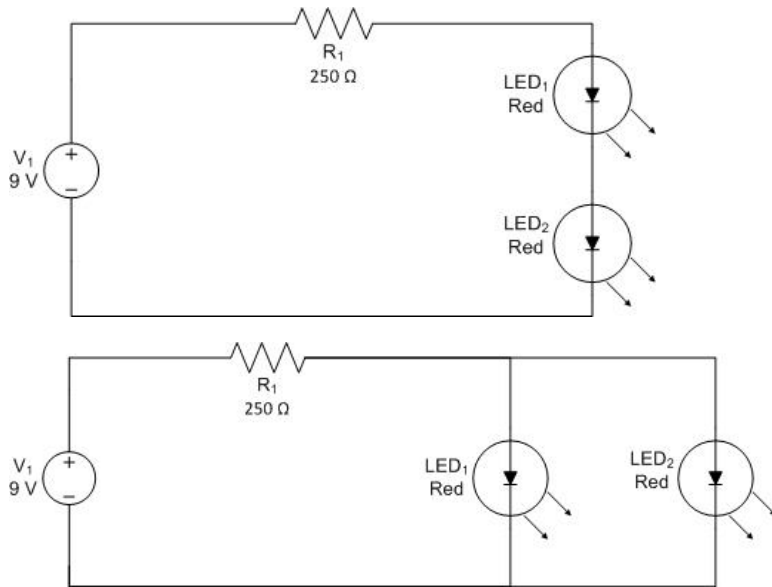


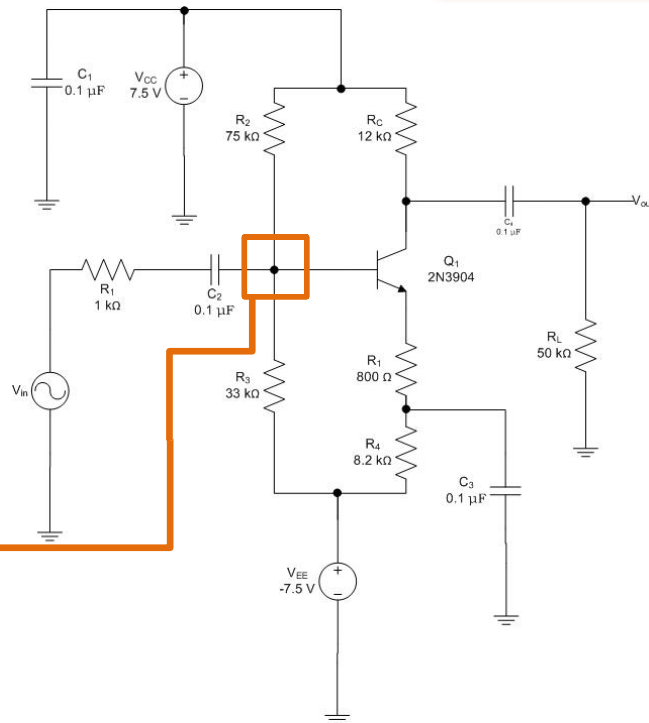
Schematics

What is a schematic?

- In Electrical Engineering, a schematic offers a simplified representation of an electric circuit using various symbols for the electrical components.



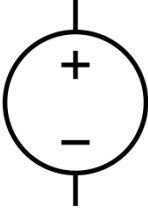
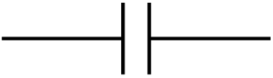
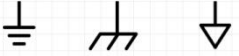
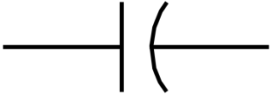


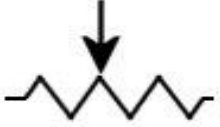
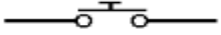
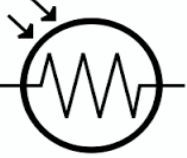
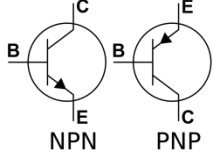
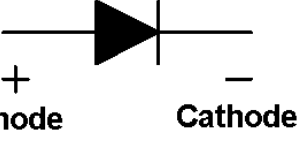

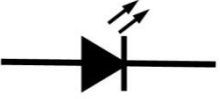
Here are two examples of simple schematics comprised of only four components. These are the kinds of schematics beginners will start on with and once you become familiar with different parts and connections, you can move on to more complex schematics like the one below.



The 'dot' means the wires are connected.

Schematics may, at first, seem too complex at first but they are primarily a combination of series and parallel connections of single components.

Symbols

	Voltage Source		Capacitor
	Ground		Capacitor
	Resistor		Switch
	Potentiometer (Variable Resistor)		Push Button Switch
	Photo-Resistor		Transistor
	Diode		Motor
	LED (Light-Emitting Diode)		

Examples

Instructions:

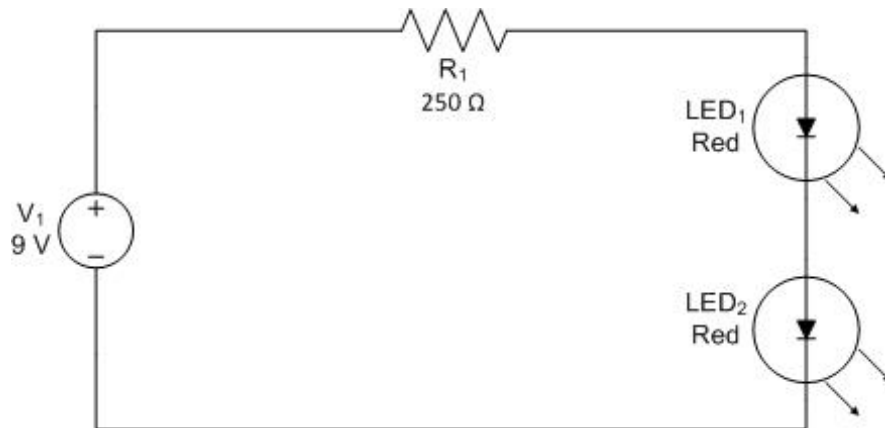
Following the schematics, connect the provided components to create a functional circuit. Once the circuit is working, see what observations can be made between the two circuits.

Components:

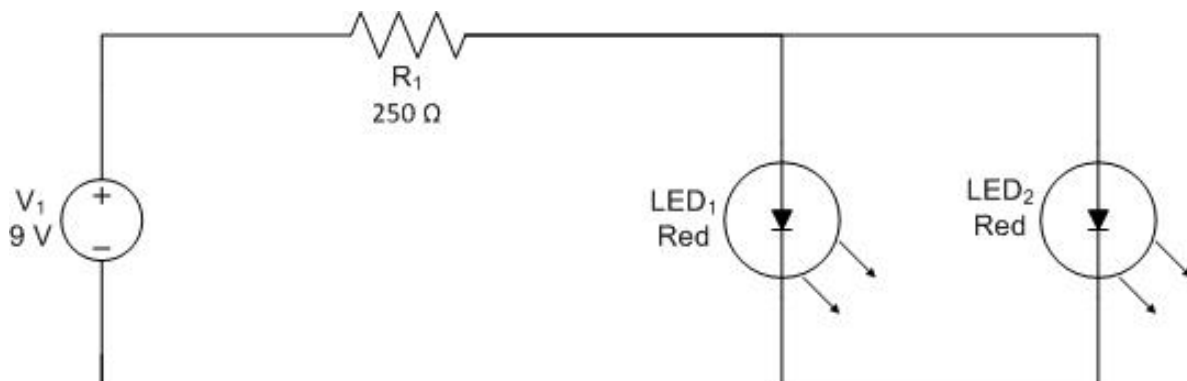
- x1 9V Battery
- x1 250 Ω resistor
- x2 Red LED

Questions:

- Is this circuit connected in series or in parallel?
- What would happen, and why, if one of the LEDs were removed?



Circuit I



Circuit II