Specifications:
- $\mathcal{E}$ (emf)
- $R$ (resistance)
- $L$ (inductance)

Switch $S$:
- a: current buildup
- b: current shutdown

Time-dependent quantities:
- $I(t)$: instantaneous current through inductor
- $\frac{dI}{dt}$: rate of change of instantaneous current
- $V_R(t) = I(t)R$: instantaneous voltage across resistor
- $V_L(t) = L \frac{dI}{dt}$: instantaneous voltage across inductor