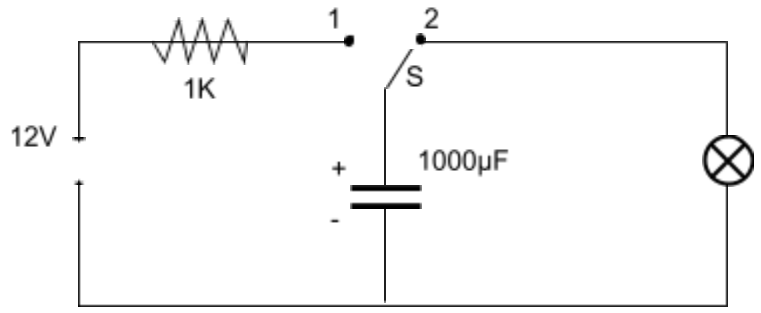
## EXPERIMENT 7

**Topic:** Observing that a capacitor can store electrical energy and transfer this energy to a load, examine current directions during capacitor charging and discharging.

Set up the circuit as shown in the figure.




1. Turn the S switch to position 1 and observe the filling of the capacitor using an avometer.
    a) When the voltage increases on the capacitor, how much voltage is there on it? Meanwhile, what is the value of the current flowing through the capacitor?
    b) As the voltage on the capacitor increases, does the current through it increase? Why?
2. Turn the S switch to position 2.
    a) Did the lamp burn out? If burned, where could it get the necessary voltage?
    b) Is the voltage on the capacitor decreasing? Meanwhile, what was the direction of the current flowing through it?
    c) During the discharge of the capacitor, does the current decrease as the voltage on it decreases?
    d) When the capacitor is completely discharged, what is the voltage on it and the current values passing through it?