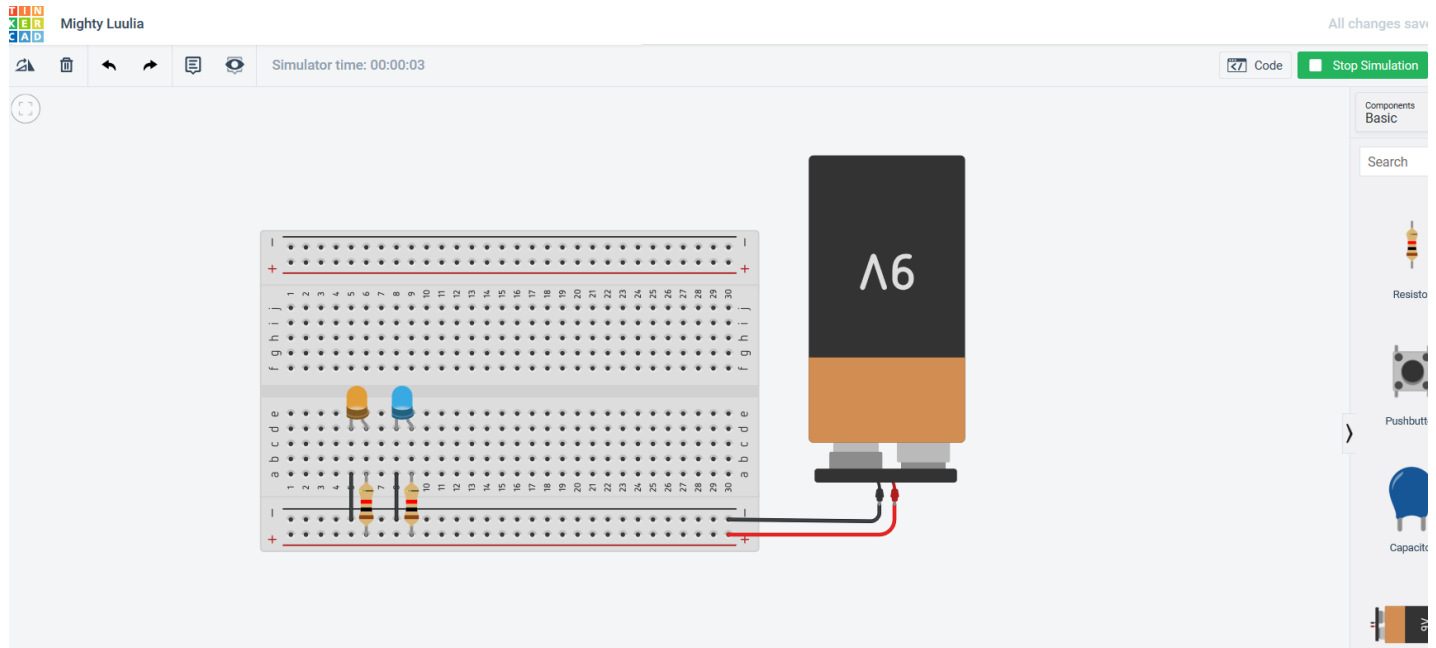


AIM : USE OF BREADBOARD

APPARATUS : LDR, breadboard, wires, arduino, LED, resistors.

CIRCUIT DIAGRAM :



THEORY : A breadboard is a rectangular plastic board with a bunch of tiny holes in it. These holes let you easily insert electronic components to prototype (meaning to build and test an early version of) an electronic circuit, like this one with a battery, switch, resistor, and an LED (light-emitting diode).

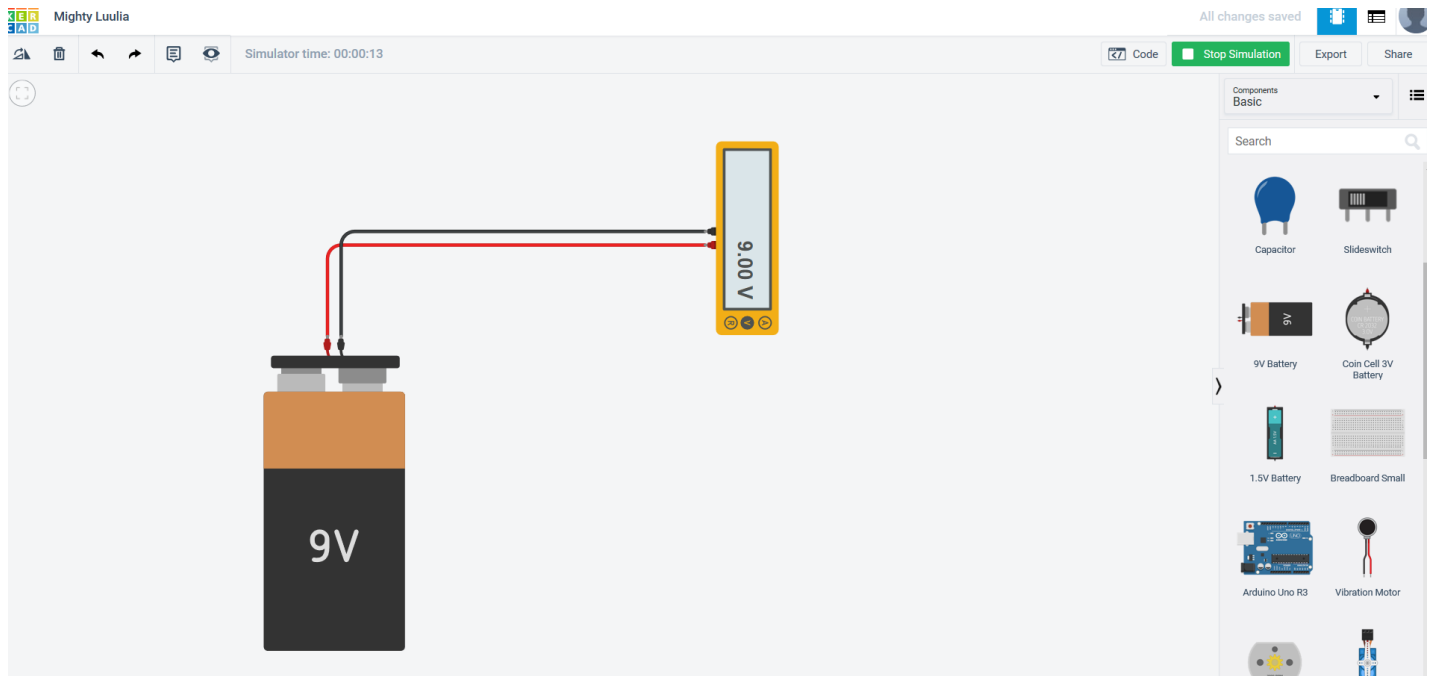
LEARNING & OBSERVATION :

A **breadboard** is **used to** build and test circuits quickly before finalizing any circuit design. The **breadboard** has many holes into which circuit components like ICs and resistors can be inserted.

AIM : USE OF MULTIMETER.

APPARATUS : Multimeter

CIRCUIT DIAGRAM :



THEORY :

A **multimeter** or a **multitester**, also known as a **VOM** (volt-ohm-milliammeter), is an [electronic measuring instrument](#) that combines several measurement functions in one unit. A typical multimeter can measure [voltage](#), [current](#), and [resistance](#). **Analog multimeters** use a [microammeter](#) with a moving pointer to display readings. **Digital multimeters** (DMM, DVOM) have a numeric display, and may also show a graphical bar representing the measured value. Digital multimeters are now far more common due to their lower cost and greater precision, but analog multimeters are still preferable in some cases, for example when monitoring a rapidly varying value.

A multimeter can be a hand-held device useful for basic [fault](#) finding and field service work, or a bench instrument which can measure to a very high degree of accuracy. Multimeters are available in a wide range of features and prices.