PAMANTASAN NG LUNGSOD NG MAYNILA
(University of the City of Manila)
Intramuros, Manila

Microprocessor Lab

Laboratory Activity No. 1
Familiarization with TinkerCAD

Score

Submitted by:
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Saturday 1pm-4pm / CPE 0412.1-2

Date Submitted
16-09-2023

Submitted to:

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1. Exercise

a. A process in Tinkercad where we can develop electronic circuits that can be quickly updated, modified and tested is called Simulating .

b. In Tinkercad, Simulation tests the working of the circuits and the components.

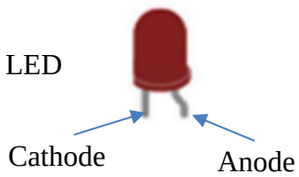
c. The device used to assemble and connect the various components is known as Breadboard .

d. In an electronic circuit with LED, the positive end of the circuit should be connected to Anode and negative end should be connected to Cathode of the LED.

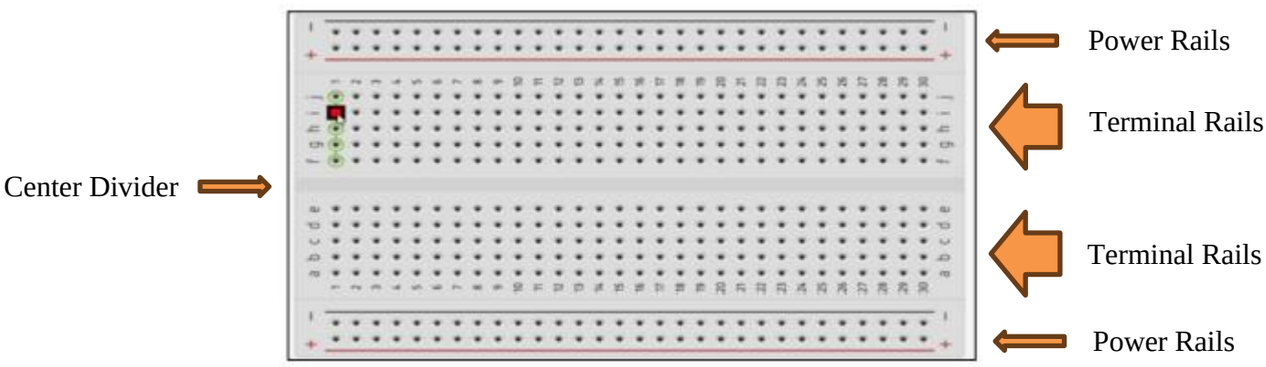
e. A Resistor is used to restrict the flow of current to electrical components

2. Label the following:

a. Anode and Cathode in a LED



b. Different parts of breadboard



c. List the electronic components used in a circuit assembly

- Resistor – A resistor limits the movement of electrical current.
- LED – An LED (light-emitting diode) is a semiconductor gadget that releases light when an electric current flows through it.
- Push Button – Push buttons are switches that turn on when they are pressed.
- Potentiometer – A potentiometer is a type of variable resistor that can be used to modify current or voltage.
- Capacitor – A capacitor stores electrical energy.
- Slide Switch – A slide switch is a switch that can be turned on or off by sliding a lever.
- 9v Battery – A 9v battery is a common type of battery that is used in many electronic devices.
- Coin cell 3v Battery – A coin cell battery is a compact, round battery that is frequently used in watches, calculators, and other diminutive electronic gadgets.
- Breadboard – A prototype board known as a breadboard is used to create and test electronic circuits.
- Micro:bit – Micro:bits are little, programmable microcontrollers that are popular among students and hobbyists.
- Arduino Uno R3 – A microcontroller board called an Arduino Uno R3 is used to create and program electronic devices.
- Vibration motor – A vibration motor is a type of electric motor that produces a vibration.
- DC motor – A DC motor is a kind of electric motor that uses rotation to produce mechanical energy from electrical energy.
- Micro servo – A micro servo is a compact, potent servo motor that is frequently utilized in robotics applications.

- Transistor – A transistor is a semiconductor device that can switch or amplify electronic signals.
- NPN transistor – A type of transistor that is frequently utilized in electronic circuits is the NPN transistor.
- LED RGB – Red, green, and blue light can be produced by an RGB LED.
- Hobby gearmotor – A form of DC motor known as a hobby gearmotor is frequently utilized in robotics and DIY projects.
- Diode – A diode is a semiconductor component that only permits current to flow in one direction.
- Photoresistor – A photoresistor is a type of resistor that reacts to light by changing its resistance.
- Soil moisture sensor – A tool that measures the moisture content of soil is called a soil moisture sensor.
- Ultrasonic distance sensor – A gadget called an ultrasonic distance sensor emits and receives ultrasonic sound waves to determine how far away an item is.
- PIR Sensor – A PIR sensor, also known as a passive infrared sensor, is a tool that uses infrared radiation emitted by people and animals to detect the presence of those subjects.
- Piezo – A piezo material is one that generates an electric voltage in response to mechanical stress.
- Temperature sensor – A device that gauges the temperature of its surroundings.
- Multimeter – A multimeter is a tool that can measure voltage, current, and resistance.