



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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<1:00PM to 6:00 PM> / <CPE 412.1-2>

Date Submitted
9-16-2023

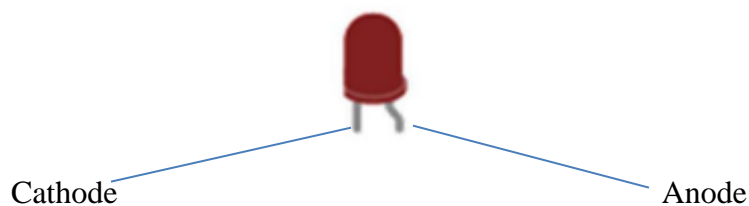
Submitted to:
Engr. Maria Rizette H. Sayo

1. Exercise

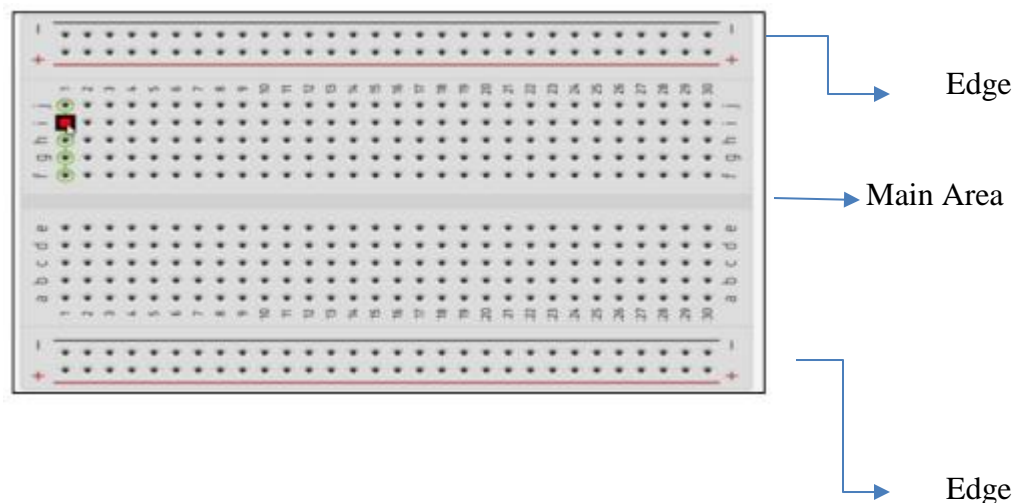
- A process in Tinkercad where we can develop electronic circuits that can be quickly updated, modified and tested is called **Prototyping Process**
- In Tinkercad, **Simulation** tests the working of the circuits and the components.
- The device used to assemble and connect the various components is known as **Breadboard**
- 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.
- A **Resistor** is used to restrict the flow of current to electrical components

2. Label the following:

- Anode and Cathode in a LED



- Different parts of breadboard



- List the electronic components used in a circuit assembly

Basic:

- Battery
- Buzzer
- Capacitor
- Diode
- LED
- Light Sensor
- Motion Sensor
- Resistor
- Servo Motor
- Switch
- Wire

Input Components:

- Temperature Sensor
- Pushbutton
- Potentiometer
- Slideswitch
- Photoresistor
- Photodiode
- Ambient Light Sensor (Phototransistor)
- Flex Sensor
- Force Sensor

Output Components:

- Dc motor
- Micro servo
- Piezo
- Hobby gearmotor
- Vibration Motor
- IR remote
- 7 segment display
- LCD 16X2
- 7 segment clock display

Power Components:

- 9V battery
- 1.5V battery
- Coin cell battery
- Solar cell
- Potato battery
- Lemon battery

Breadboard:

- Breadboard Mini
- Breadboard Small

Microcontrollers:

- Arduino UNO R3
- Micro.bit
- ATtiny

Instruments:

- Multimeter
- Powersupply
- Function Generator
- Oscilloscope

Integrated Circuits:

- Timer
- Dual Timer
- 741 Operational
- Quad Comparator
- Dual Comparator

Power Control:

- NPN Transistor
- PNP Transistor
- Small Signal pMOS
- Relay SPDT

Connectors:

- 8 Pin Header
- USB Standard