**Microprocessor Lab**

Laboratory Activity No. 1

**Familiarization with TinkerCAD**

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Score

*Submitted by:*

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**Saturday (1-4pm) / CPE 0412.1-2**

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*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 prototyping.

b. In Tinkercad, start/stop 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:



1. Anode and Cathode in a LED

Anode

Cathode

Cathode

1. Different parts of breadboard



Power rail

Terminal strips

Center divider

Ground rail

1. List the electronic components used in a circuit assembly
2. [Resistors](https://www.dfliq.net/blog/the-basics-of-electrical-components/#resistors)
3. [Electrical Wires & Power Cables](https://www.dfliq.net/blog/the-basics-of-electrical-components/#wire)
4. [Transformer](https://www.dfliq.net/blog/the-basics-of-electrical-components/#transformer)
5. [Capacitors](https://www.dfliq.net/blog/the-basics-of-electrical-components/#capacitors)
6. [Light Emitting Diode (LED)](https://www.dfliq.net/blog/the-basics-of-electrical-components/#led)
7. [Transistors](https://www.dfliq.net/blog/the-basics-of-electrical-components/#transistors)
8. [Relay](https://www.dfliq.net/blog/the-basics-of-electrical-components/#relay)
9. [Inductors](https://www.dfliq.net/blog/the-basics-of-electrical-components/#inductors)
10. [Integrated Circuit (IC)](https://www.dfliq.net/blog/the-basics-of-electrical-components/#ic)
11. [Motor](https://www.dfliq.net/blog/the-basics-of-electrical-components/#motor)
12. [Circuit Breaker](https://www.dfliq.net/blog/the-basics-of-electrical-components/#circuit-breaker)
13. [Fuse](https://www.dfliq.net/blog/the-basics-of-electrical-components/#fuse)
14. [Switch](https://www.dfliq.net/blog/the-basics-of-electrical-components/#switch)
15. [Battery](https://www.dfliq.net/blog/the-basics-of-electrical-components/#battery)
16. Buzzer
17. Photoresistor
18. Alligator clip wires
19. Thermistor
20. Sensors