**Microprocessor Lab**

Laboratory Activity No. 2

**Arduino and Tinkercad Interface**

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Score

*Submitted by:*

**Dela Cruz, Alfonso Rafael C.**

**<Saturday (1pm to 7pm) > / <20231 - CPE 0412.1-2**>

*Date Submitted*

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*Submitted to:*

**Engr. Maria Rizette H. Sayo**

I. Objectives

This laboratory activity aims to implement the principles and techniques of hardware programming using Arduino through:

- creating an Arduino programming and circuit diagram.

II. Method/s

- Perform a task problem given in the presentation.

- Write a code and perform an Arduino circuit diagram of a ring counter that display

eight (8)LEDs starting from left.

III. Results

**TinkerCad**

**Exercise 1: Write a code that does a ring counter display for eight (8) LEDs starting from left.**

A circuit board with wires connected to it

Description automatically generated

Figure No.1 Ring Counter Display Circuit Diagram

**Components Used**

1. 8 LEDs
2. Resistor
3. Breadboard

**CODE:**

A screenshot of a computer program

Description automatically generated

A screenshot of a computer program

Description automatically generated

IV. Conclusion

***In conclusion, the goal of this Tinkercad lab project was to demonstrate how to use Arduino for hardware programming in a practical setting. The development of an Arduino programming code and the related circuit schematic was one of the main goals. Throughout the activity, participants were required to write code and create an Arduino circuit schematic for a ring counter to solve a specific challenge described in the presentation. This counter was made to sequentially illuminate eight LEDs, starting with the leftmost LED. Participants had the chance to learn insightful details about hardware programming and Arduino applications through this practical activity, which improved their comprehension of these ideas and methods.***

**References**

[1] D.J.D. Sayo. “University of the City of Manila Computer Engineering Department Honor Code,” PLM-CpE Departmental Policies, 2020.

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