



IOT Based Digital Keypad Door Lock System



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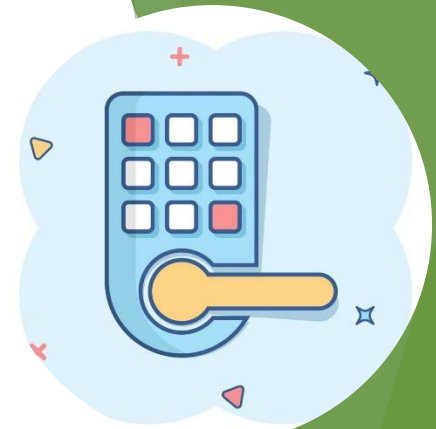
Abstract

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ABSTRACT

- ❑ The main objective of the mini project is to design a digital/smart door lock system that can modernize door locks.
- ❑ Smart door lock can help smoothen the door unlocking process.
- ❑ Smart door lock can guarantee more security than standard door locks and increase general safety of society



INTRODUCTION

MOTIVATION

- In today's world, home safety is a major concern due to the increase in population as well as steep increase in crime rate.
- The need for a more modern, secure and revolutionized door locking system arises as the standard of living as well as security concerns of citizens increases
- To meet and match these needs, designing a smart door lock that can satisfy the needs and concerns of today's world is necessary



PROBLEM STATEMENT

- ☐ Security Risks
- ☐ Authentication vs. Convenience
- ☐ Battery Life
- ☐ Integration Issues
- ☐ Accessibility
- ☐ Durability
- ☐ Emergency Access
- ☐ Cost vs. Performance



TOOLS AND LANGUAGES REQUIRED

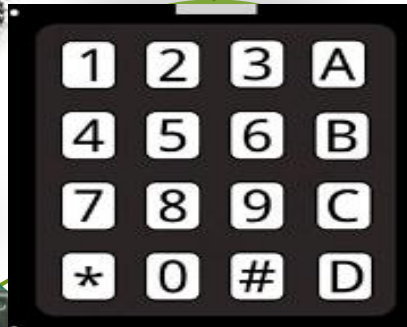
Jumper Wire



Arduino UNO



LCD



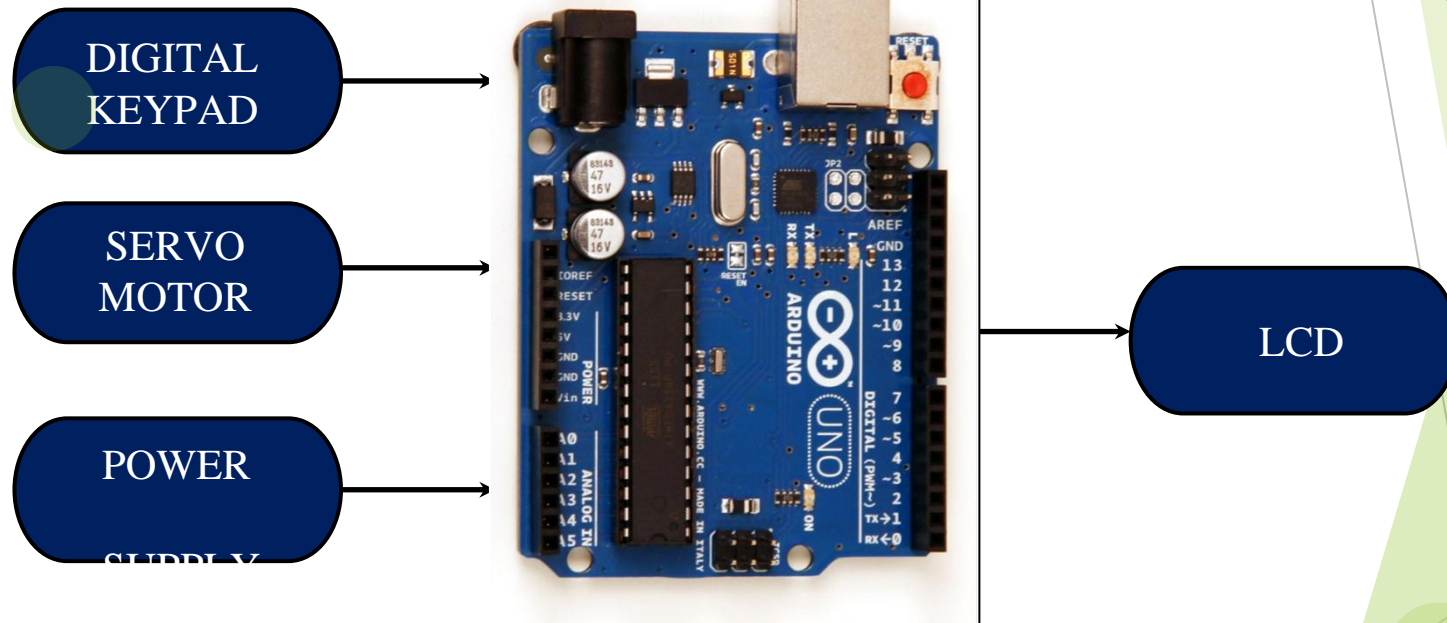
9V Battery



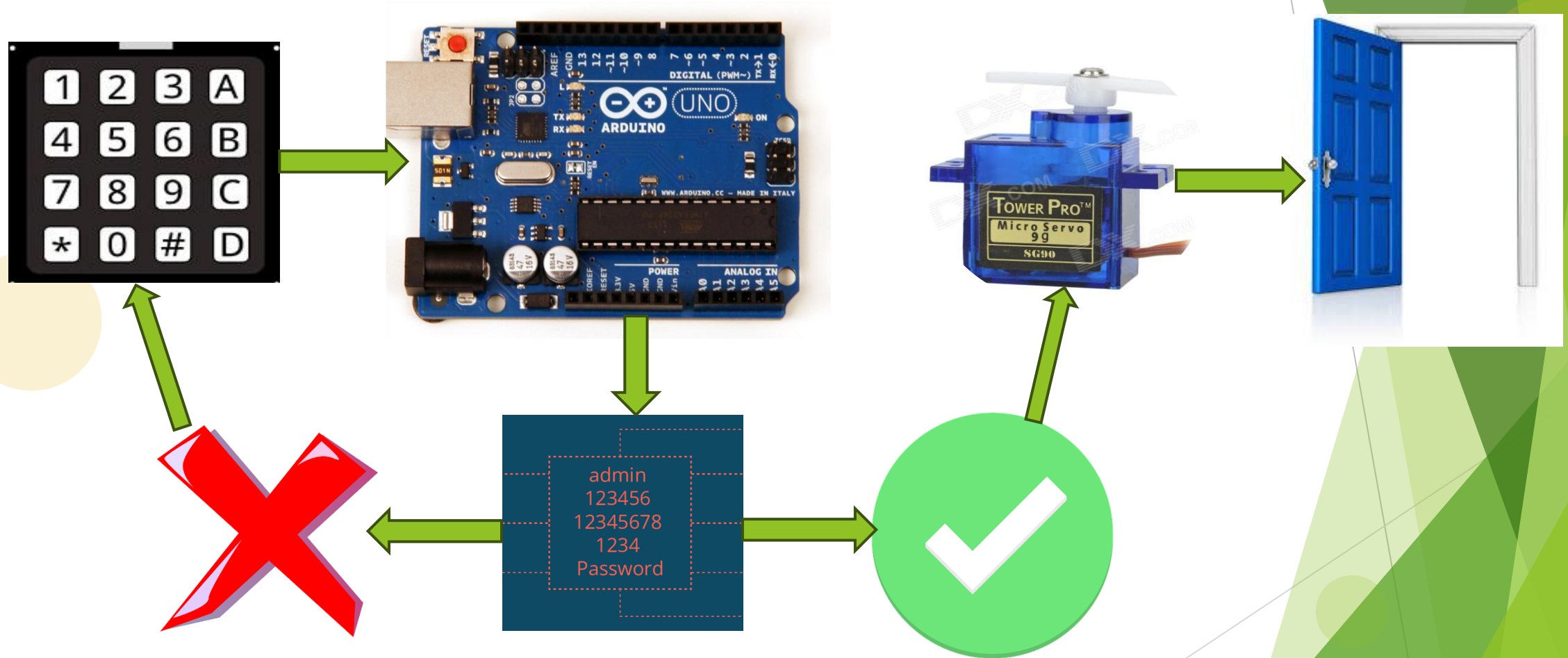
Tower Pro SG90
Servomotor

PROPOSED METHODOLOGY

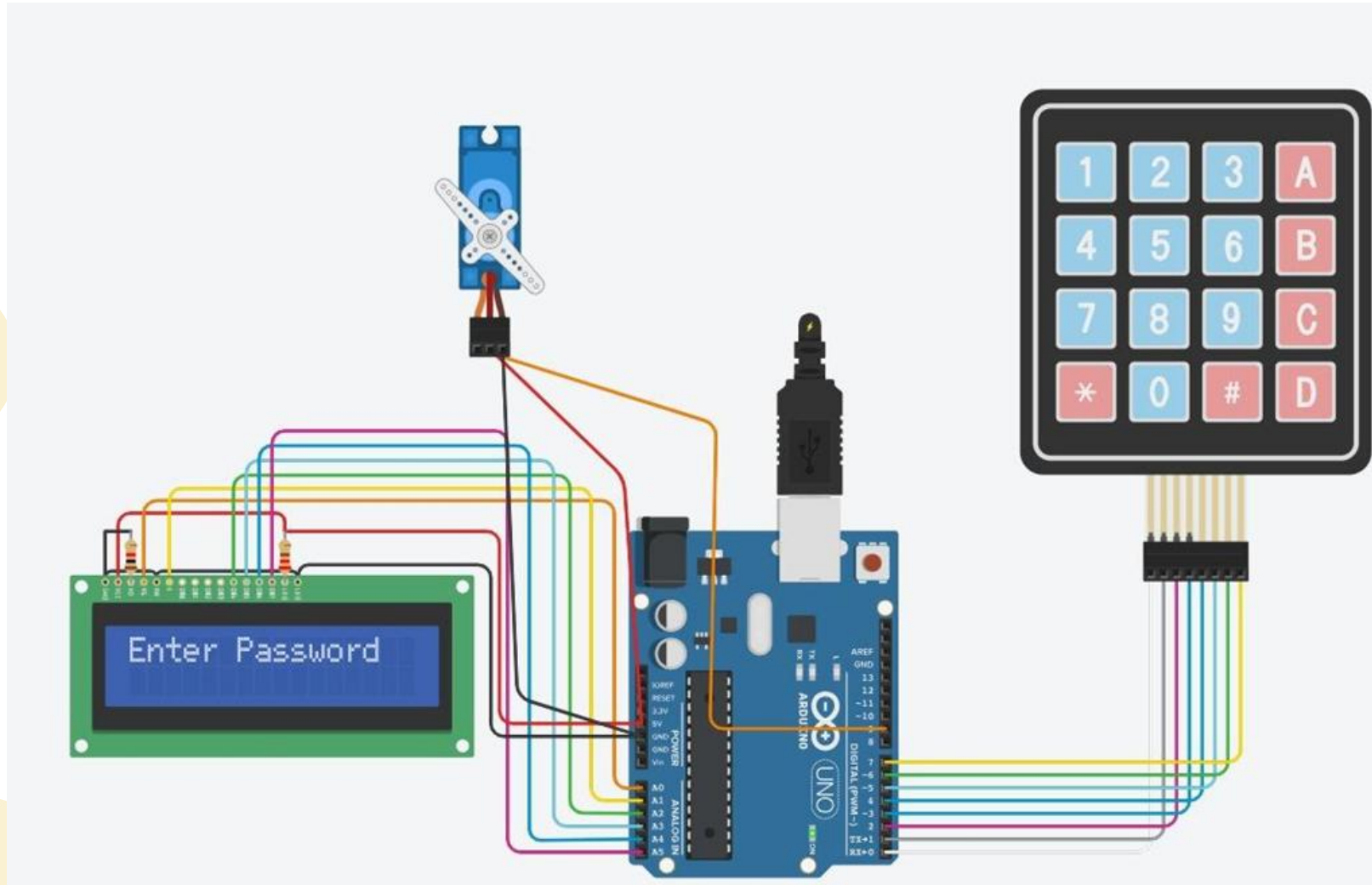
□ BLOCK DIAGRAM



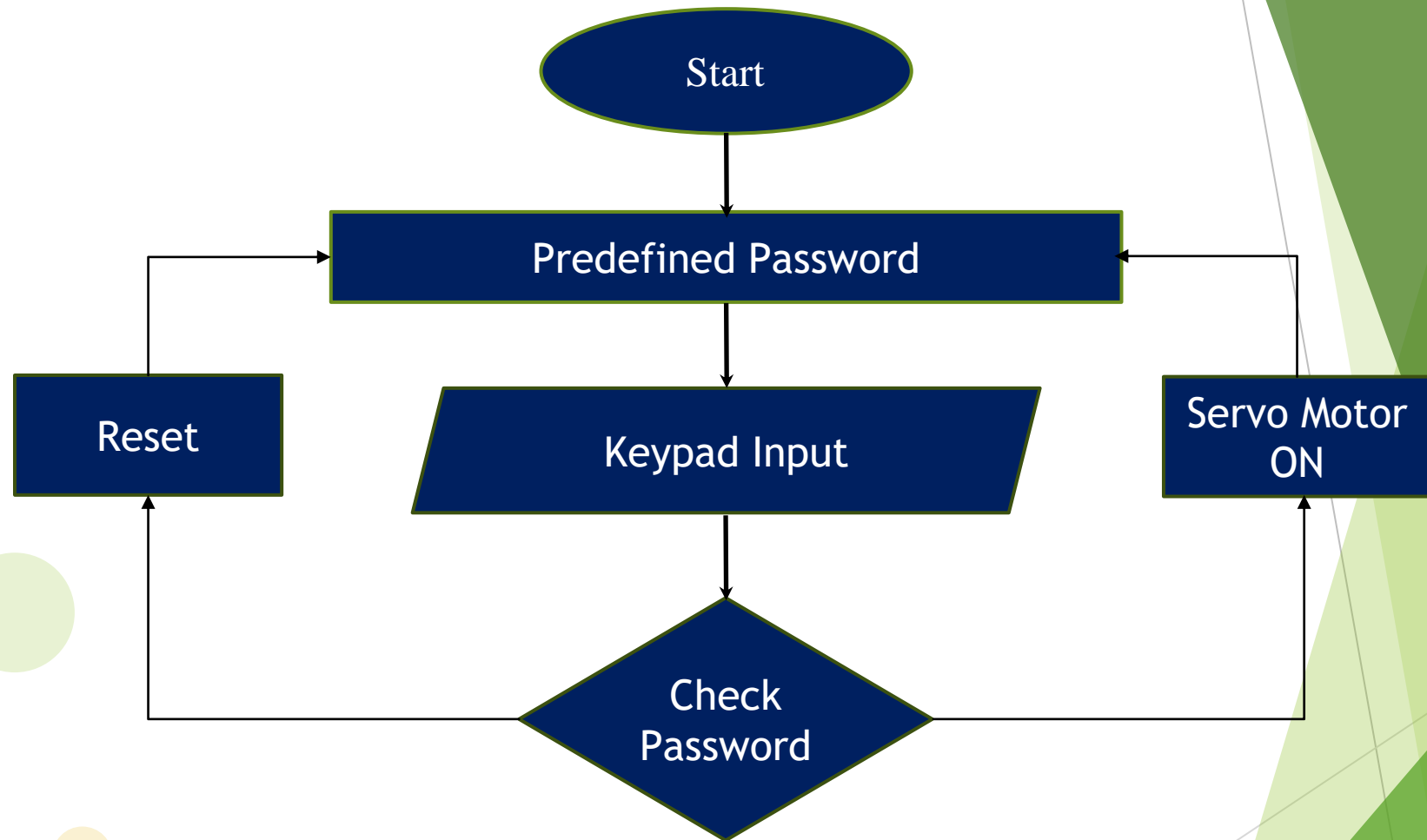
HOW IT WORKS??



IMPLEMENTATION



DESIGN
FLOW



ADVANTAGES

- ▶ **Convenience:** Smart door locks allow remote operation via a smartphone app, enabling you to lock or unlock your door from anywhere.
- ▶ **Enhanced Security:** They offer advanced security features like encrypted communication, keyless entry, and real-time tamper alerts.
- ▶ **Keyless Entry:** Smart locks eliminate the need for physical keys, offering entry through keypads, biometrics, or smartphone apps.
- ▶ **Integration with Smart Home Systems:** They can integrate with other smart home devices for a unified home automation experience.
- ▶ **Audit Trails and Notifications:** Smart locks provide activity logs and real-time notifications about who enters or exits your home.

APPLICATIONS

Schools



College



Household



Hospitals



Apartments



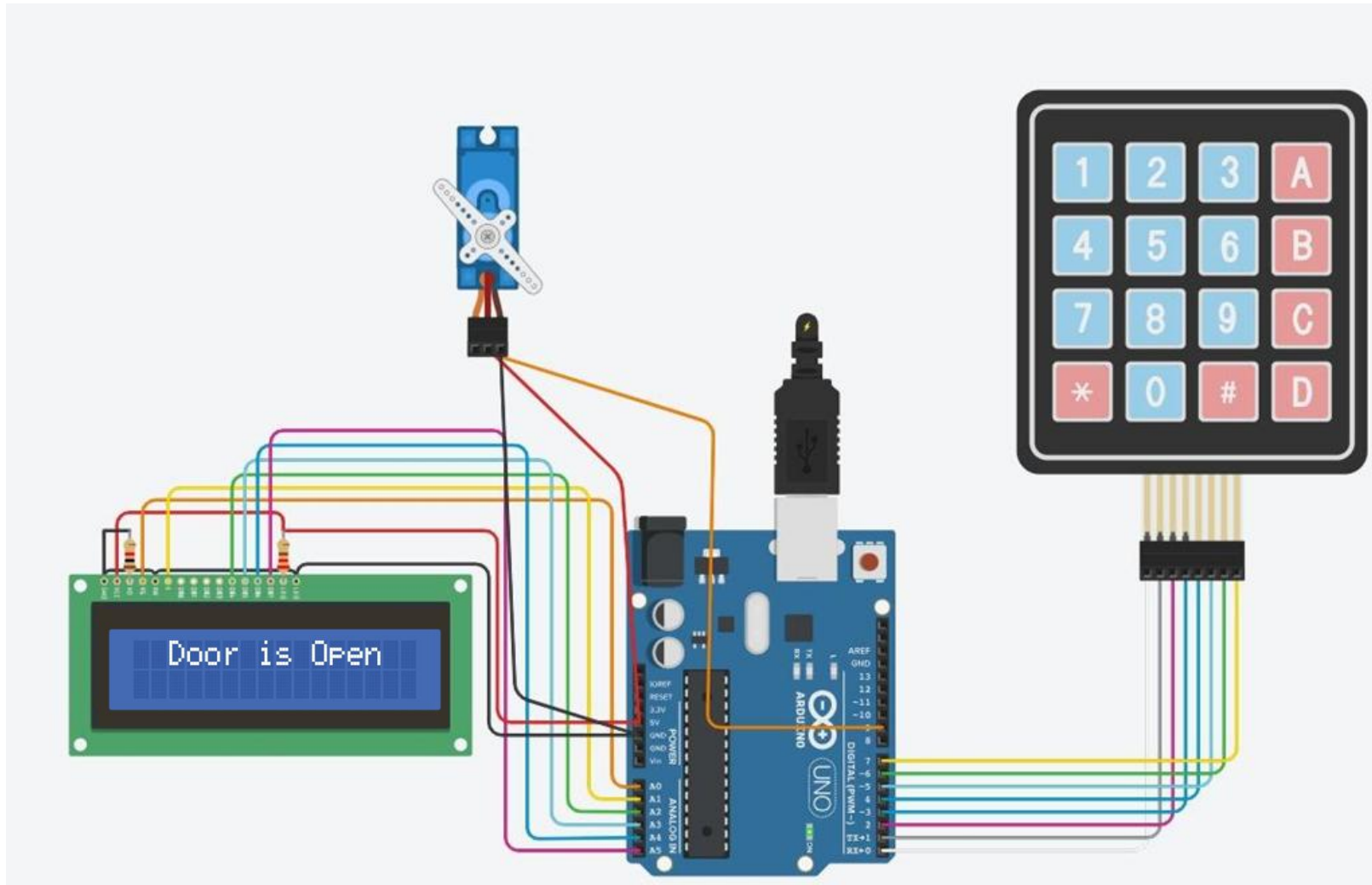
CONCLUSION

In conclusion, the IoT-based digital keypad door lock system significantly enhances security through advanced technology and real-time connectivity. It provides users with the convenience of remote access management and detailed activity logs. The integration of IoT allows for seamless interaction with other smart home devices, elevating overall security and ease of use. As technology progresses, this system is well-positioned to offer even more innovative solutions for modern security needs.



SIMULATION RESULT

1





DEMONSTRATION USING TINKER CAD



THANK YOU



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QUERIES???