# PASSWORD BASED DOORLOCK SECURITY SYSTEM

**A**PRIL 18

**GROUP**

- BT21EEE104 DASARI SHALINI MADHURI
- BT21EEE108 REVATHI CHIKKUDU
- BT21EEE116 ANISHA SINGH

# AIM:

PROJECT TO SETUP PASSWORD BASED DOOR LOCK SECURITY SYSTEM

# APPARATUS:

4001 quad NOR gate                    4070 quad XOR gate

two eight position DIP switches      two light-emitting diodes

four 1N914 "switching" diodes       ten 10kΩ resistors, two 470Ω resistors,

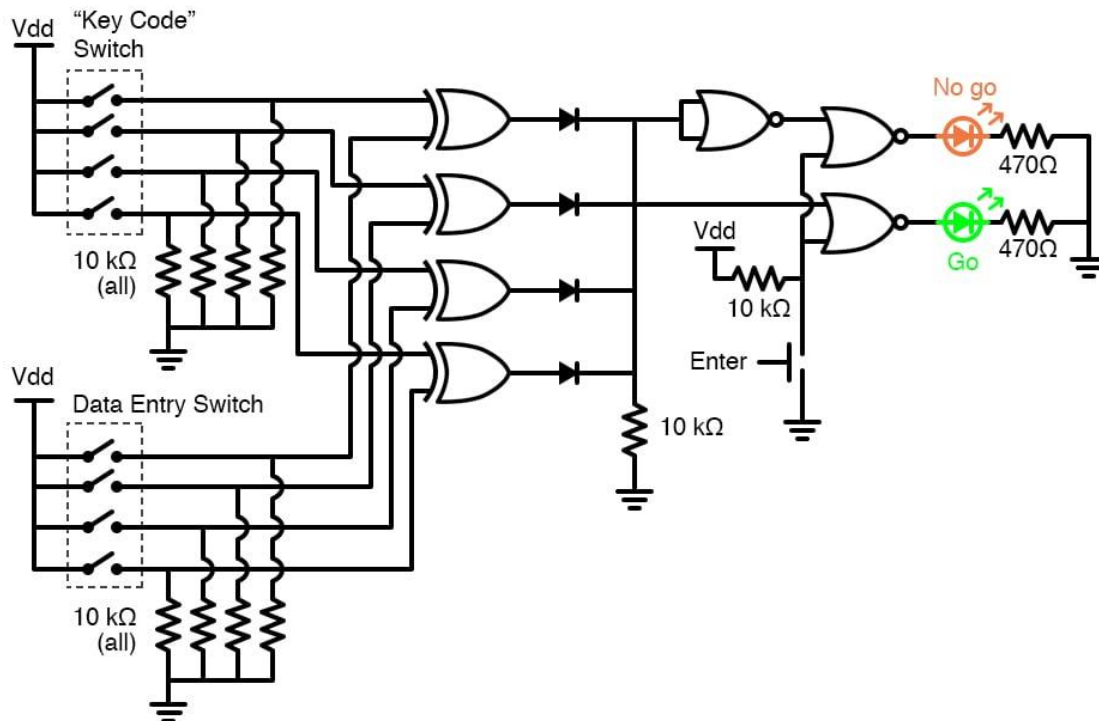a pushbutton switch                      power supply,

breadboard, and wires.

# OBJECTIVE:

For this project, individuals will implement a password security system. The "Password Security System" project will give individuals the opportunity to become familiar with using NOR and XOR logic gates within a circuit

# SUMMARY:

For this project, NOR and XOR gates, switches, LEDs, and resistors are used within this project. The "key code" and "data entry" switches are the two eight position DIP switches. Also, whenever a password in the "enter" switch is pressed in – the light will become either red if the password is incorrect or green if the password is correct. Above it all, individuals can receive alerts directly to his/her mobile devices each time a password has been attempted.

# CIRCUIT DIAGRAM:



# WORKING PRINCIPLE:

- The four XOR gates output terminals are connected through a diode network  which functions as a four input OR gate
- Any of the four XOR gates output is a "high" signal indicating that the entered code and the key code are not identical then a "high"signal will be passed on th the gate logic
- If the two 4-bit codes are identical then none of the XOR gate output will be high and the pull-down resistor connected to the common side of the diode will provide a "low"signal state th the NOR logic

*NOR GATE PERFORMANCE*

- Prevent eighter of the leds to glow if enter button is not pressed
- If enter is pressed and all outputs of XOR gate is low than green light will glow else siren will turn on indicating wrong password

# CONCLUSION:

- from this project ,we made a password based doorlock security system using XOR ,NOR gates and also understood the working of password security system

# APPLICATIONS:

- LOCKERS
- GATES OF APPARTMENTS....ETC