



DLD Project Proposal

Instructor Name:

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Group Members:

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Project Title:

Smart room lights with pin code system

Objective:

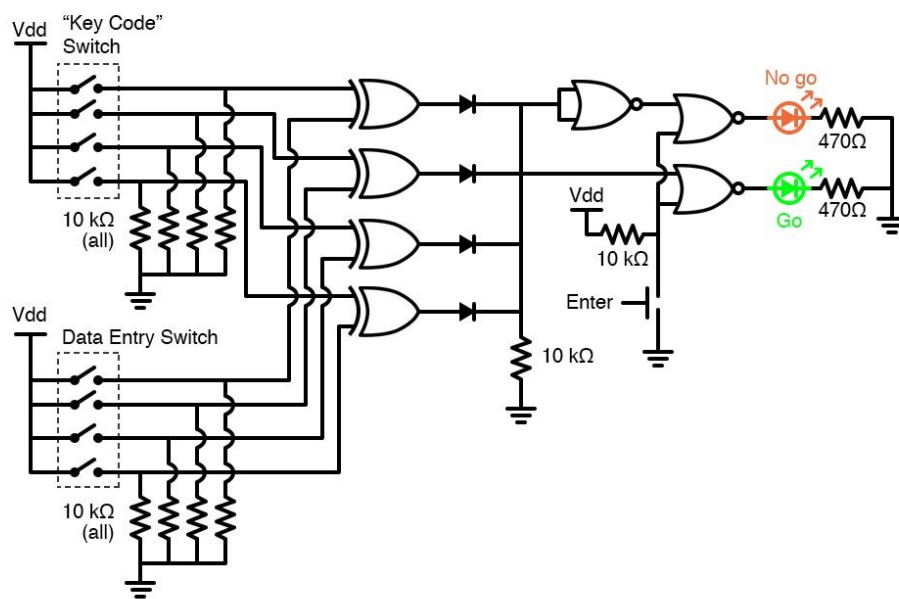
The objective of this project is to make a room with some features that exhibit smartness through technology. Two features that will be included are:

- To enter the room, the person will enter the pin, which will be checked by pin code system.
- The lights brightness will also be adjusted with the environment automatically.

Components Used:

- IC
 - XOR Gate (4070)
 - NOR Gate (4001)
- Diode
 - Basic
 - 1N4007
- Switch
 - Push
 - DIP
- LED
- Resistor
 - 10 k Ω
 - 470 Ω
 - 270 k Ω
 - 220 Ω
 - 1 M Ω

- 2 k Ω
- Jumper Wires
- Breadboard
- 9V Battery
- MIC
- 47 μ F Capacitor
- BC547 Transistor

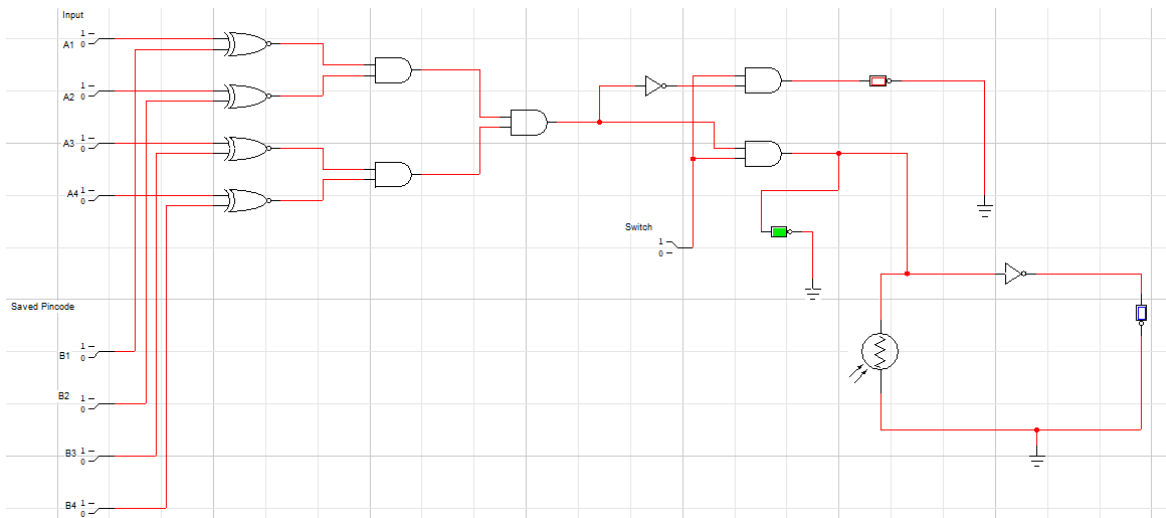


Circuit Diagrams:

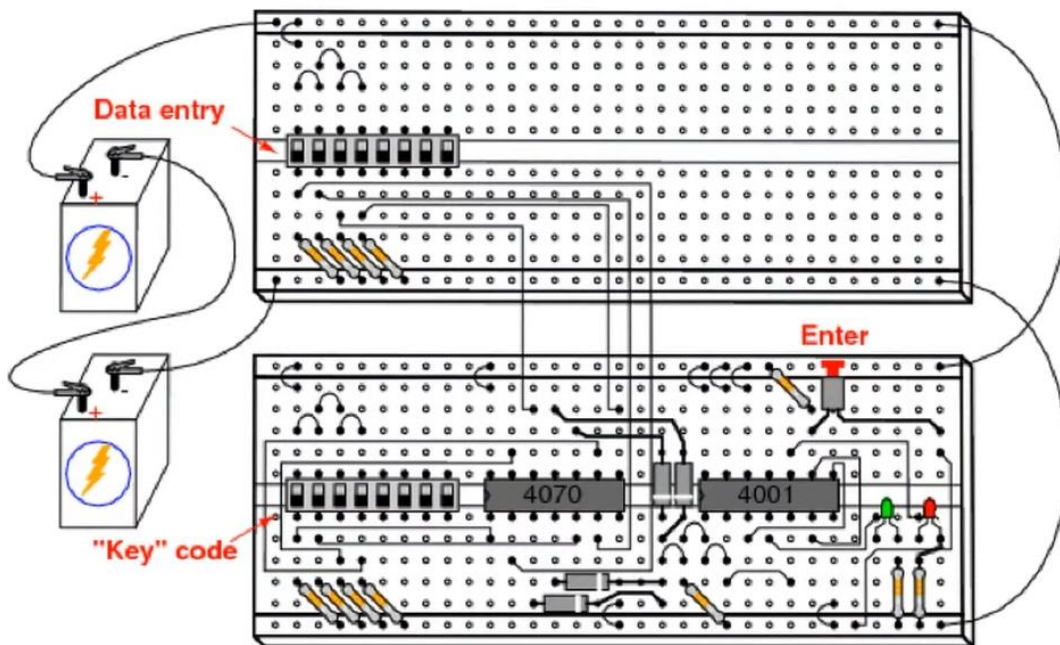
Pin Code System:

The pin code system is implemented using the XOR gates and the universal nor gate. The XOR gates are used as comparators to compare the input and the lock key, if the entered key is correct and push button is pressed, a green led is turned on, otherwise the red led is turned on.

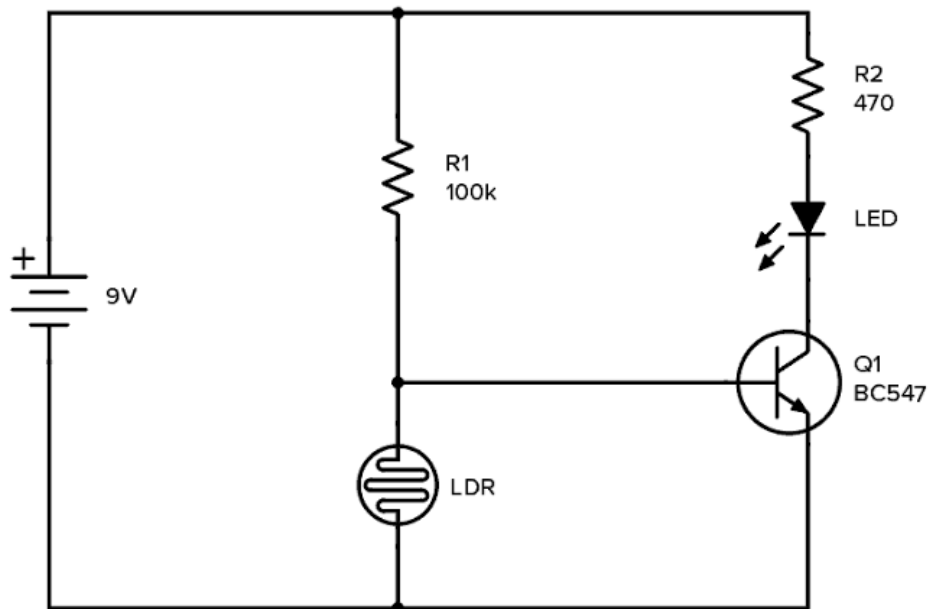
Software Implementation:



Hardware Implementation:



Smart Room Light:



Clap Switch Circuit:

