Task 1 - Controlling LED using single Push Button

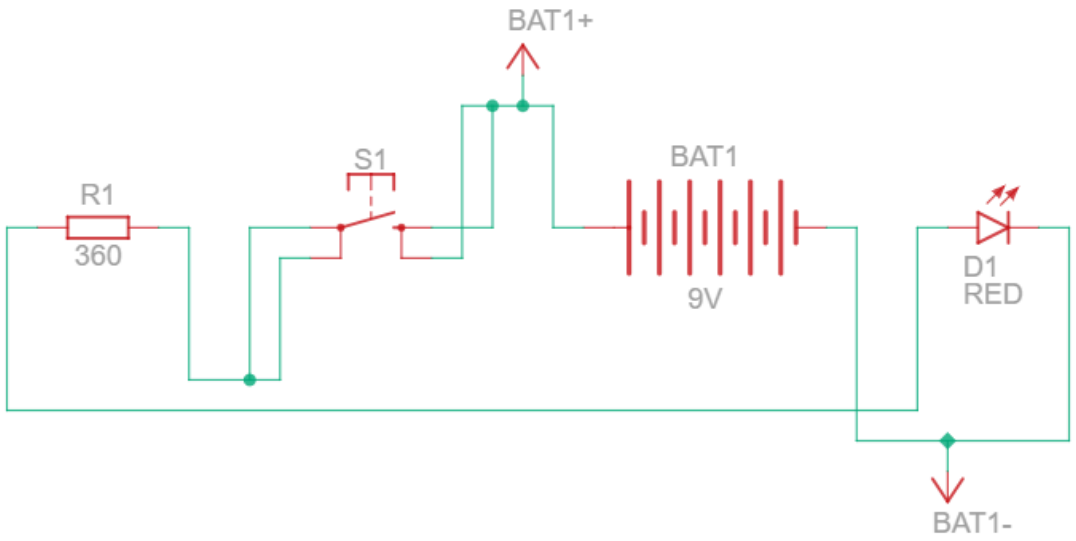
Aim: Create an electrical circuit to control an LED using a push button.

Component List:

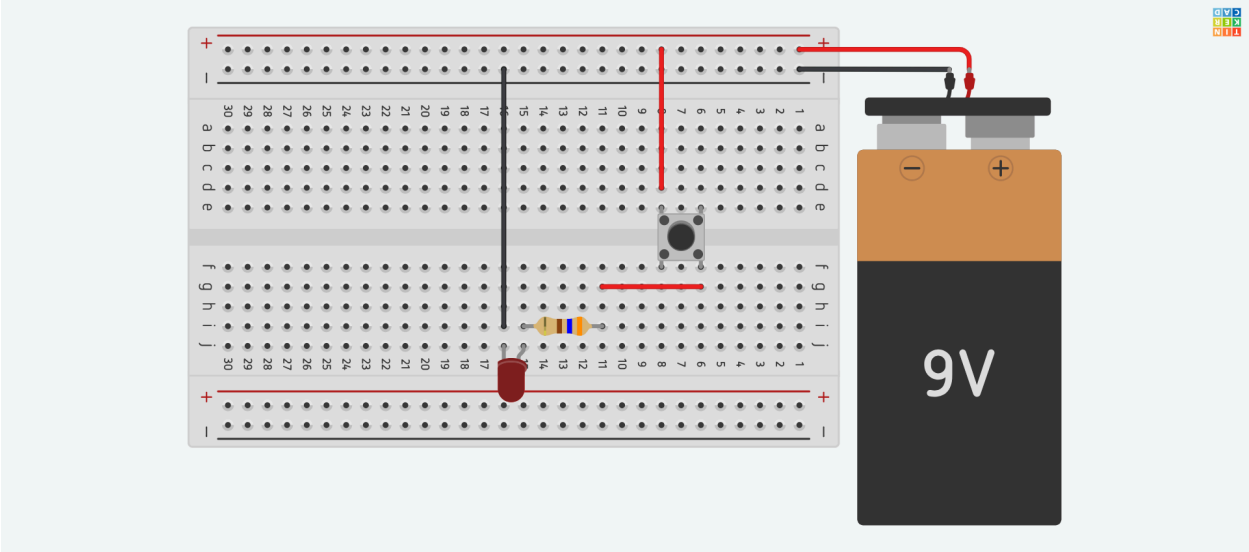
Component List — Download CSV

Name	Quantity	Component
BAT1	1	9V Battery
S1	1	Pushbutton
D1	1	Red LED
R1	1	360 Ω Resistor

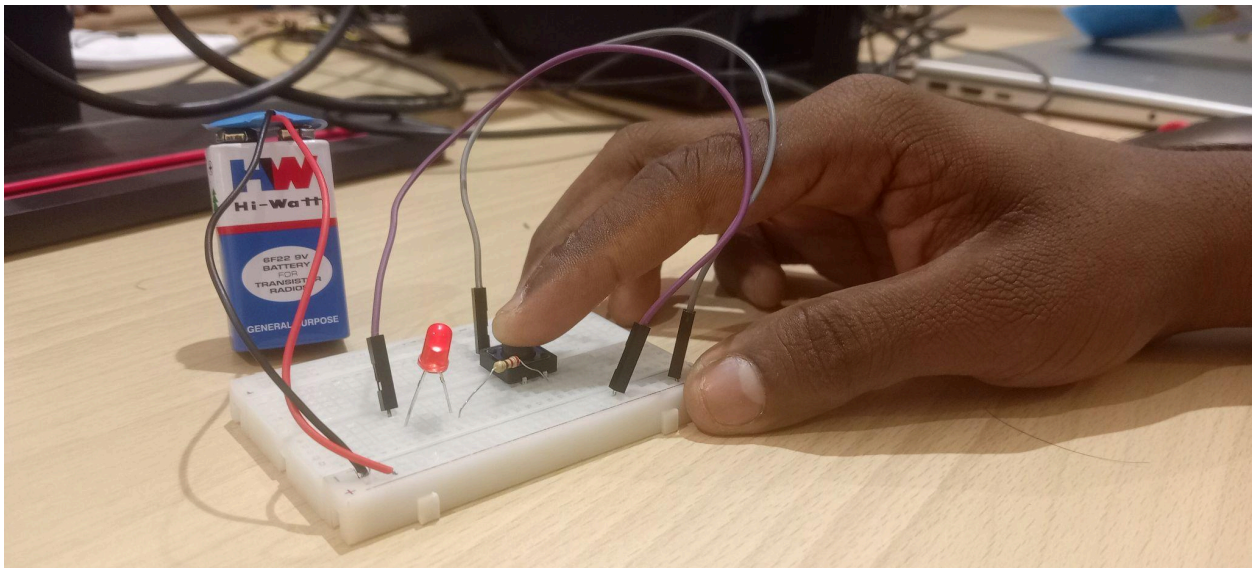
Schematic View :



Simulation: (using TINKERCAD)



Hands-on experience:



Task 2 - Controlling LED using two Push Button (AND Gate Condition)

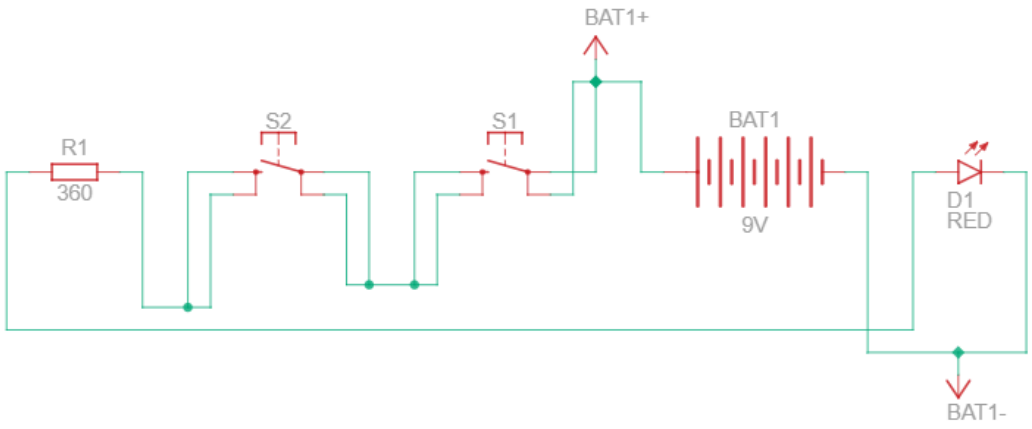
Aim: Create an electrical circuit to control an LED using two push buttons, where the LED turns on only when both push buttons are pressed simultaneously (AND gate condition).

Component List:

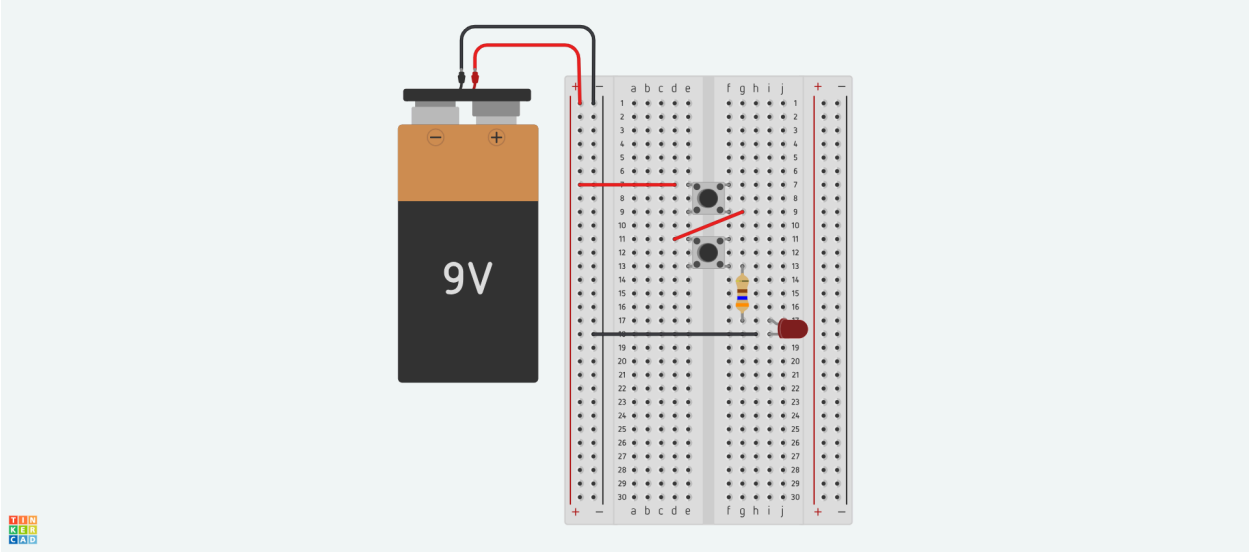
Component List — Download CSV

Name	Quantity	Component
BAT1	1	9V Battery
S1 S2	2	Pushbutton
D1	1	Red LED
R1	1	360 Ω Resistor

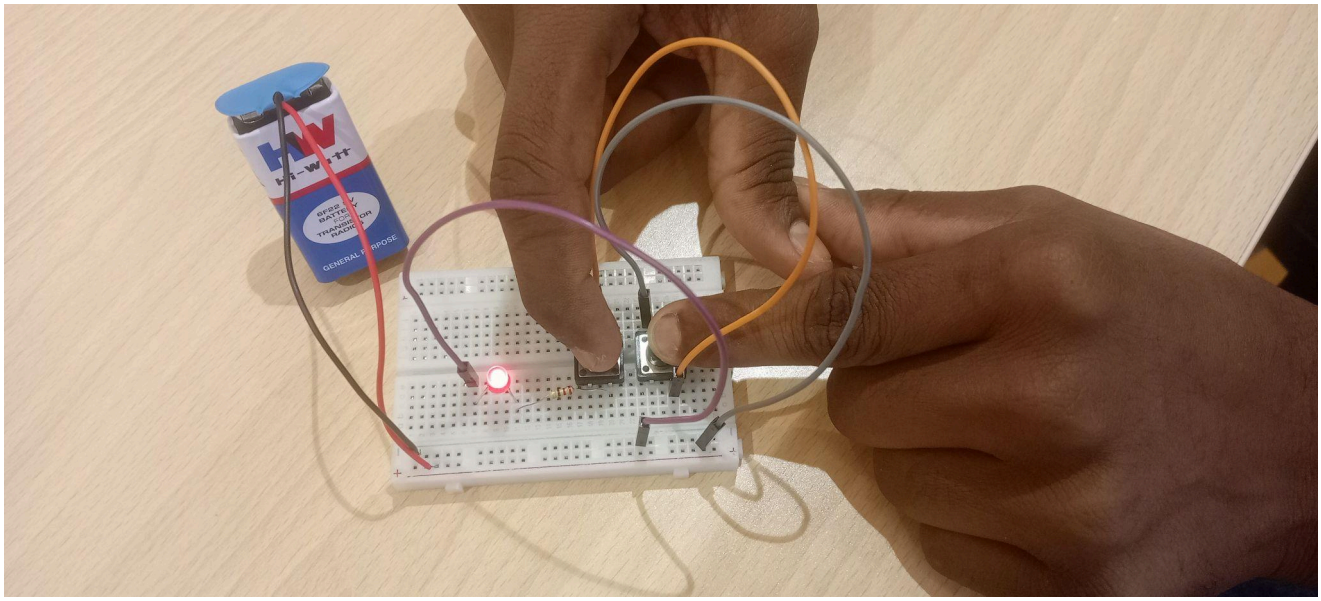
Schematic View :



Simulation: (using TINKERCAD)



Hands-on experience:



Task 3 - Controlling LED using two Push Button (OR Gate Condition)

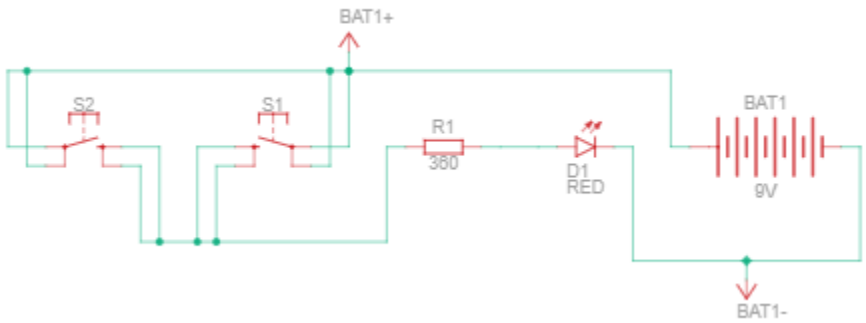
Aim: Create an electrical circuit to control an LED using two push buttons, where the LED turns on when either one of the push buttons is pressed (OR gate condition).

Component List:

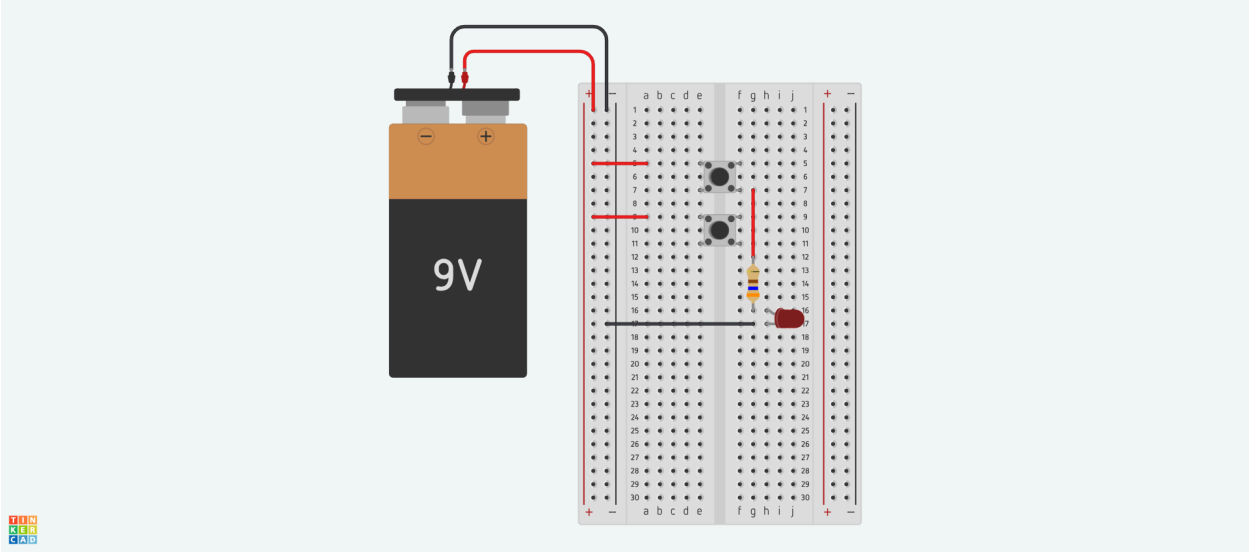
Component List — Download CSV

Name	Quantity	Component
BAT1	1	9V Battery
S1 S2	2	Pushbutton
R1	1	360 Ω Resistor
D1	1	Red LED

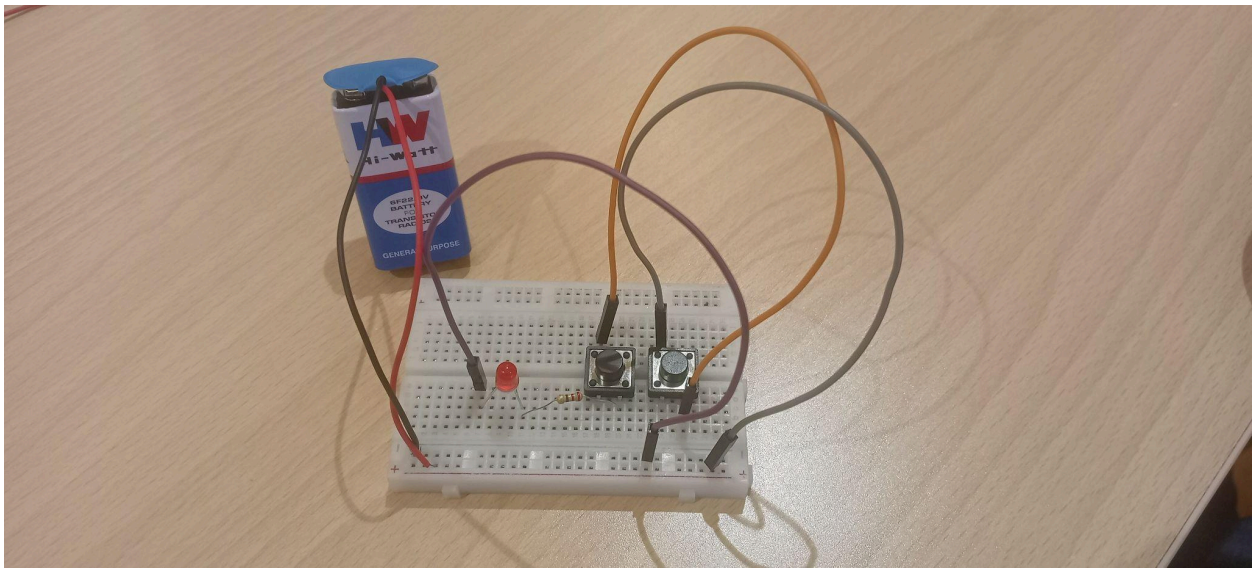
Schematic View :



Simulation: (using TINKERCAD)



Hands-on experience:



By

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