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Methodology of a 4 Bits Binary Counter.

1. For the 7805-voltage regulator the pin1 should be connected to the source, pin2 should be connected to the ground.
2. For the button, input pin should be connected to the pin3 of 7805-voltage regulator.
3. For the 1K OHM resistor it must be connected between the output pin of the button and to the ground.
4. For the 1st 100 OHM resistor, input pin should be connected at the output pin of the button and output pin should be connected at the positive pin of the 1st led.
5. For the 1st led, negative pin should be connected to ground.
6. For the 1st 7474 IC, pin 1 should be in series with a 10k OHM resistor and the source, pin 2 should be in series with a 10k OHM resistor and the ground, pin 3 should be connected at the output pin of the button, pin 4 should be in series with a 10k OHM resistor and the source, pin 5 should be connected to pin 11, pin 6 should be in series with a 100 OHM resistor and the led, pin 2 and pin 6 should be connected, pin 7 should be connected to the ground, pin 8 should be in series with a 100 OHM resistor and the led, pin 10 should be in series with a 10k OHM resistor and the source, pin 12 should be in series with a 10k OHM resistor and the ground, pin 13 should be in series with a 10k OHM resistor and the source, pin 14 should be connected to the source.
7. For all the LEDS in the 1st 7474 IC, all negative pin should be connected to the ground.

8. For the 2nd 7474 IC, pin 1 should be in series with a 10k OHM resistor and the source, pin 2 should be in series with a 10k OHM resistor and the ground, pin 3 should be connected at the pin 9 of the 1st 7474 IC, pin 4 should be in series with a 10k OHM resistor and the source, pin 5 should be connected to pin 11, pin 6 should be in series with a 100 OHM resistor and the led, pin 2 and pin 6 should be connected, pin 7 should be connected to the ground, pin 8 should be in series with a 100 OHM resistor and the led, pin 10 should be in series with a 10k OHM resistor and the source, pin 12 should be in series with a 10k OHM resistor and the ground, pin 13 should be in series with a 10k OHM resistor and the source, pin 14 should be connected to the source.
9. For all the LEDS in the 2nd 7474 IC, all negative pin should be connected to the ground.
10. Conduct functionality test.