

Move the content of one register to another register using 7474IC

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1 Abstract

Design a sequential circuit that shifts its content to another register using 7474IC.

2 Components

Component	Value	Quantity
Bread board	-	1
Arduino	Uno	1
LED	-	4
IC	7474	2
Jumper Wires	-	20

Table 1:

3 Procedure

- 1.Generate the CLOCK signal using the arduino code
- 2.Connect the Arduino, LEDs andthe two 7474 ICs according to Table below.
- 3.Verify the output for the sequence by changing the D1 pin to Vcc and Ground for different clock cycles.

Arduino	D13					Vcc					~GND				
7474	clk-1	clk-2	5 - 12	9		1	4	10	13	14	7	5	9		
7474	clk-1	clk-2		2	5 - 12	1	4	10	13	14	7			5	9
LED												led1	led2	led3	led4

Table 2: connections

4 Truth table

Give the input sequence 0110 to the register and verify using the truth table. We need to give the input from LSB to MSB.

– Try the sequence 1100 using the same circuit and observe the output.

D1	Q1	Q2	Q3	Q4
0	0	0	0	0
1	1	0	0	0
1	1	1	0	0
0	0	1	1	0
0	0	0	1	1
0	0	0	0	1
0	0	0	0	0

Table 3:

5 Code

Execute the following code using the below provided link

https://github.com/Radhikarkv/fwc_project/assignment.ino

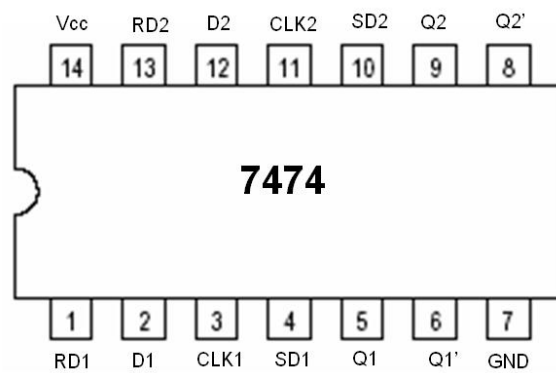


Figure 1: pindiagram