

# Electronics Circuits – Project 03 2 digits automatic counter with 2x7 segments displays

#	Student ID	Student Name	Grade (10)
1			
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١. يتم تسليم المشروع في خلال أسبوعين من تاريخ عرضه، و يتم حذف درجتان و نصف من المشروع عن كل أسبوع تأخير  
٢. يتم تسليم المشروع لمعيد المقرر مباشرة

## Objective

To build a functional prototype of 2 digits counter that displays its counts on 2 x 7-segments displays

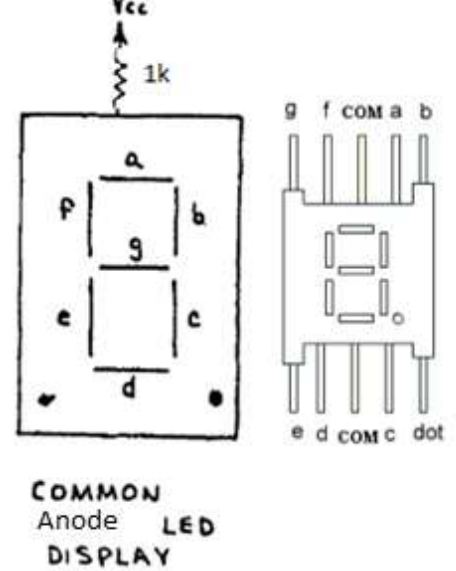
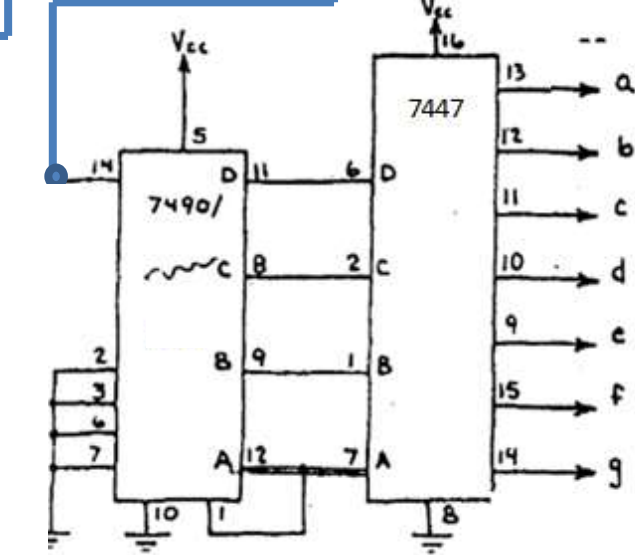
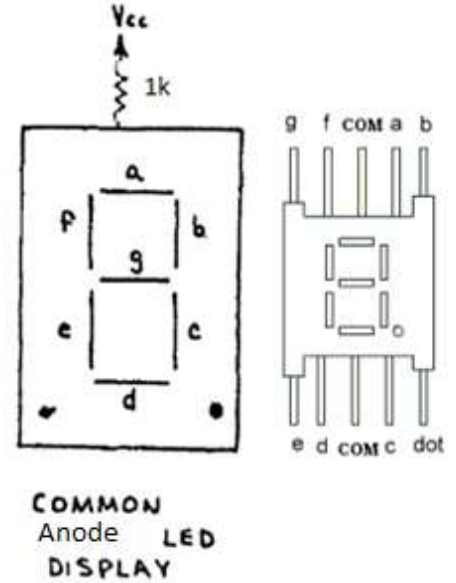
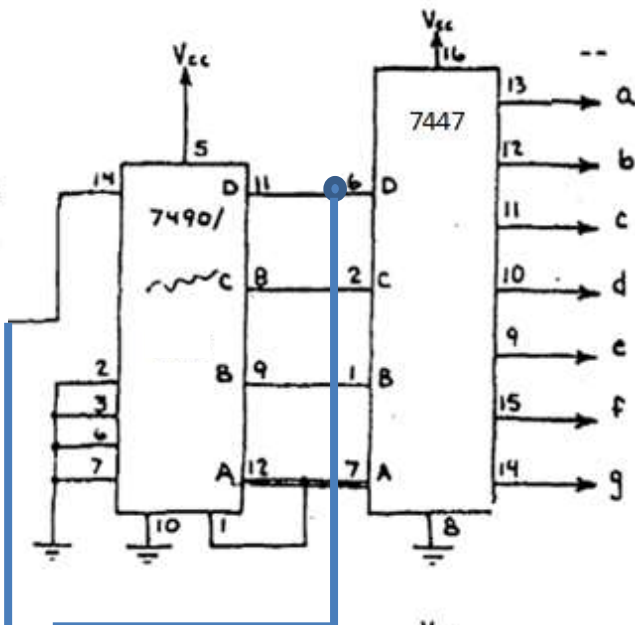
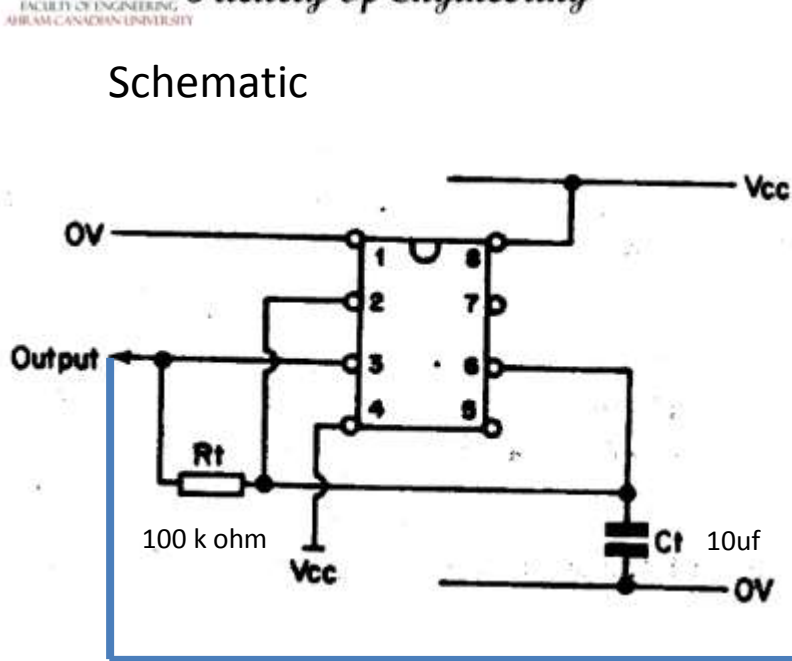
## Theory

Circuits consists of four different stages

1. Power supply (3 x AA batteries 1.5 volt)
2. Pulse generator (bi-stable 555, R=100K, C=10 uf)
3. counter (2 x 7490)
4. 7-segments display & decoder (2 x common cathode 7 segments, 2 x 7447 IC, resistors 4x1 Kohm).



### Schematic



## Components list

#	item	link	image
1	3 x AAA Battery Holder + On/Off Switch	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=72_75&amp;products_id=1195">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=72_75&amp;products_id=1195</a>	
2	Panasonic 1.5V AA-Size Battery (Pack of 4)	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=72_75&amp;products_id=708">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=72_75&amp;products_id=708</a>	
3	2 Pin PCB Screw Terminals Block	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=752">http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=752</a>	
4	Bread Board 630-Tie Point "BB-01"	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=164">http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=164</a>	
5	Connecting Jumper Wires for Bread Board & Arduino (65 Wire) 22AW	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=3183">http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=3183</a>	
6	555	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=609">http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=609</a>	
7	10 x 1 K resistor	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=31_46_69&amp;products_id=342">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=31_46_69&amp;products_id=342</a>	

8	10 x 1K	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=31_46_69&amp;products_id=342">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=31_46_69&amp;products_id=342</a>	
9	5 x led	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=60&amp;products_id=228">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=60&amp;products_id=228</a>	
10	2 x 7490	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=21_45&amp;products_id=97">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=21_45&amp;products_id=97</a>	
11	2 x 7447	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=21_45&amp;products_id=91">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=21_45&amp;products_id=91</a>	
12	2 x Common Anode 7-segments display	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=152&amp;products_id=1068">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=152&amp;products_id=1068</a>	
13	Capacitor = 10 uF	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=30_88&amp;products_id=485">http://ram-e-shop.com/oscmax/catalog/product_info.php?cPath=30_88&amp;products_id=485</a>	
14	DIP Switch 1 Way	<a href="http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=1239">http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=1239</a>	