CPE301D – SPRING 2023

Design Assignment - KICAD

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Primary Github address: https://github.com/SON-Abe/submission_da.git
Directory: submission_da/Design_Assignments/CPE301D

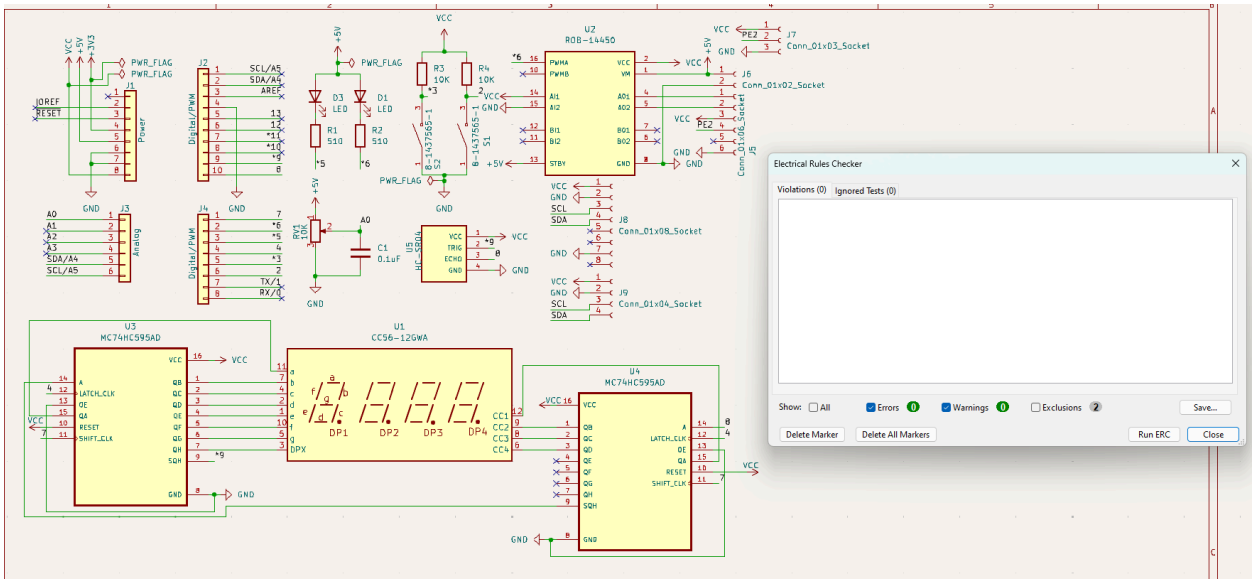
Submit the following for all Labs:

1. In the document, for each task submit the modified or included code (only) with highlights and justifications of the modifications. Also, include the comments.
2. Use the previously create a Github repository with a random name (no CPE/301, Lastname, Firstname). Place all labs under the root folder ESD301/DA, sub-folder named LABXX, with one document and one video link file for each lab, place modified asm/c files named as LabXX-TYY.asm/c.
3. If multiple asm/c files or other libraries are used, create a folder LabXX-TYY and place these files inside the folder.
4. The folder should have a) Word document (see template), b) source code file(s) and other include files, c) text file with youtube video links (see template).

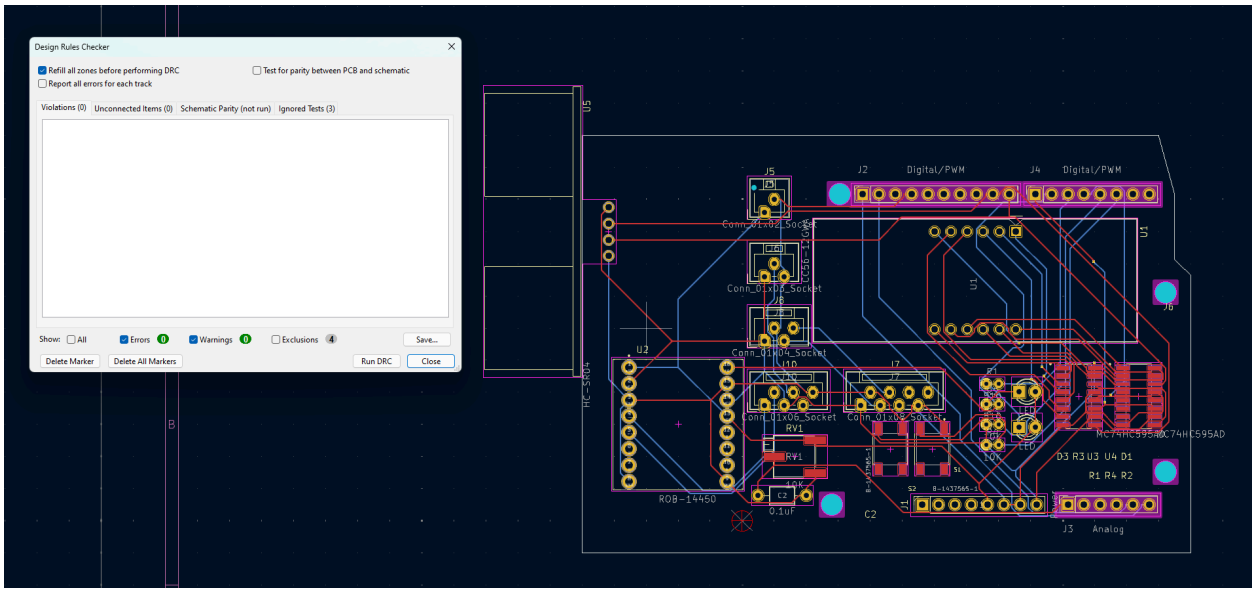
1. COMPONENTS LIST AND CONNECTION BLOCK DIAGRAM w/ PINS

HC-SR04
8-1437565-1
MC74HC595AD
ROB-14450
Analog
Digital/PWM
Digital/PWM
Conn_01x03_Socket
0.1uF
Conn_01x04_Socket
Conn_01x08_Socket
LED
Power
CC56-12GWA
510
Conn_01x06_Socket
10K
Conn_01x02_Socket
10K

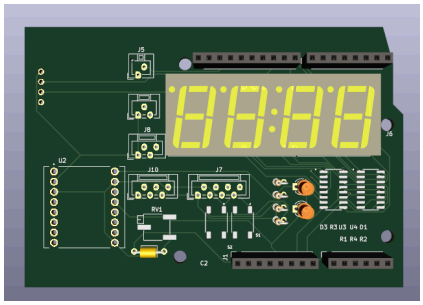
2. SCHEMATICS

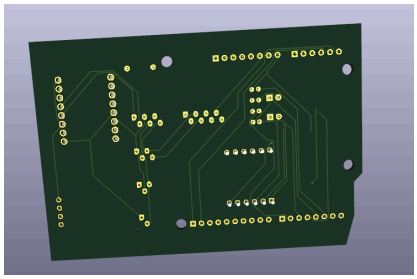


3. LAYOUT



4. 3D VIEW (Front & Back)





5. BILL OF MATERIALs

	A	B	C	D	E	F
	Id	Designator	Footprint	Quantity	Designation	Supplier and ref
	1	U5	XCVR_HC-SR04	1	HC-SR04	
	2	S2,S1	SW_8-1437565-1	2	8-1437565-1	
	3	U4,U3	SOIC127P600X175-16N	2	MC74HC595AD	
	4	U2	MODULE_ROB-14450	1	ROB-14450	
	5	J3	PinSocket_1x06_P2.54mm_Vertical	1	Analog	
	6	J2	PinSocket_1x10_P2.54mm_Vertical	1	Digital/PWM	
	7	J4	PinSocket_1x08_P2.54mm_Vertical	1	Digital/PWM	
	8	J6	JST_ZE_B03B-ZESK-D_1x03_P1.50mm_Vertical	1	Conn_01x03_Socket	
	9	C2	C_Axial_L3.8mm_D2.6mm_P7.50mm_Horizontal	1	0.1uF	
	10	J8	JST_ZE_B04B-ZESK-D_1x04_P1.50mm_Vertical	1	Conn_01x04_Socket	
	11	J7	JST_ZE_B08B-ZESK-D_1x08_P1.50mm_Vertical	1	Conn_01x08_Socket	
	12	D1,D3	LED_D3.0mm_FlatTop	2	LED	
	13	J1	PinSocket_1x08_P2.54mm_Vertical	1	Power	
	14	U1	CC56-12GWA	1	CC56-12GWA	
	15	R2,R1	R_Axial_DIN0204_L3.6mm_D1.6mm_P1.90mm_Vertical	2	510	
	16	J10	JST_ZE_B06B-ZESK-D_1x06_P1.50mm_Vertical	1	Conn_01x06_Socket	
	17	R4,R3	R_Axial_DIN0204_L3.6mm_D1.6mm_P1.90mm_Vertical	2	10K	
	18	J5	JST_ZE_B02B-ZESK-1D_1x02_P1.50mm_Vertical	1	Conn_01x02_Socket	
	19	RV1	Potentiometer_Bourns_3269P_Horizontal	1	10K	

6. GITHUB LINK OF THIS DA

CPE301D

Student Academic Misconduct Policy
http://studentconduct.unlv.edu/misconduct/policy.html

"*This assignment submission is my own, original work*".
NAME OF THE STUDENT