ELEC 2210 **PRE-LAB** COVER PAGE
Complete and attach this page to the front of your pre-lab.

Meeting # _4_   _Binary Arithmetic Circuits_
Title of Lab Experiment

Student Name: _Emerson, Gabriel, T_
Name (Last, First, MI)

Student Email: _gte0002_
AU 7-character username

GTA: _Paul Atilola_
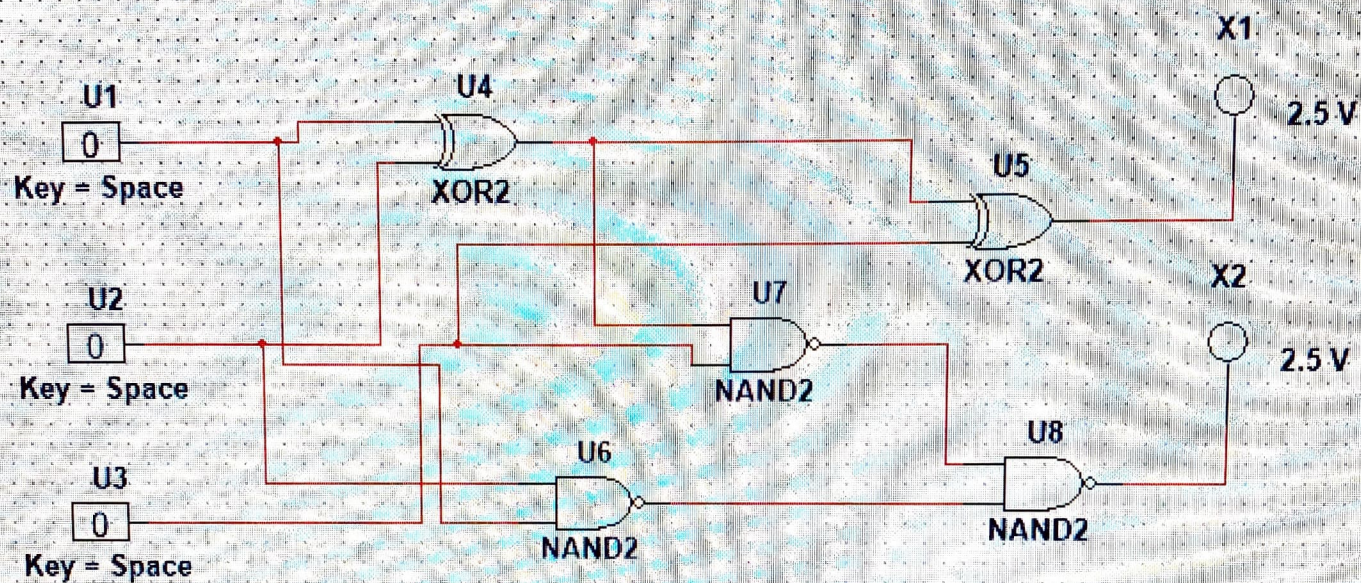*Name of your GTA*

Section you are enrolled in: (Circle One): (1) 2 3 4 5 6 7 8

Date pre-lab submitted: (dd / mm / yy): _01_/_31_/_21_

I hereby certify that this pre-lab work was performed and written by me exclusively.

_____   _1/31/21_
Student signature   Date signed

U1
0
Key = Space

U2
0
Key = Space

U3
0
Key = Space

U4
XOR2

U5
XOR2

U6
NAND2

U7
NAND2

U8
NAND2

X1
2.5 V

X2
2.5 V

Gabriel Emerson

VCC
5V

X1 2.5 V   X10 2.5 V   X11 2.5 V   X12 2.5 V

74LS161N
U2

XLV1

74LS83N
U3

Gabriel Emerson

U4
DCD_HEX_DIG_GREEN

X13 2.5 V   X14 2.5 V   X15 2.5 V   X16 2.5 V

X2 2.5 V

U5
DCD_HEX_DIG_GREE
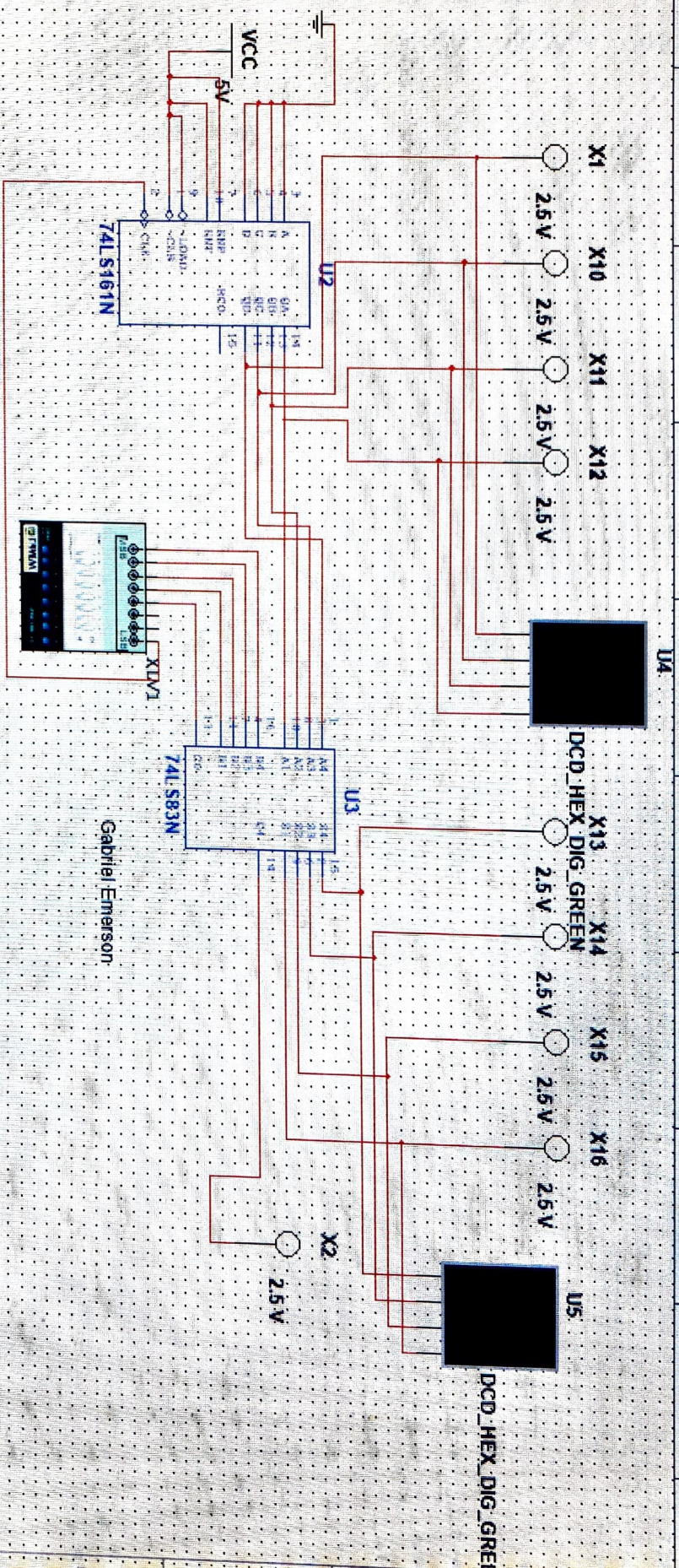
Truth Table for 1-bit adder

A	B	Cin	Cout	S
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	1	1

Truth Table 4-bit adder (in Hex)

A	B	C	Cout	S	Calculated Values Cout	S	Check
0	0	0	0	0	0	0	✓
0	0	1	0	1	0	1	✓
1	0	0	0	1	0	1	✓
7	7	1	0	F	0	F	✓
8	7	0	0	F	0	F	✓
8	8	0	1	0	1	0	✓
F	F	0	1	E	1	E	✓
F	F	1	1	F	1	F	✓

CLR
CLK
A
B
C
D
GND
ENP

Vcc
RCO
Qa
Qb
Qc
Qd
ENT
LOAD

+5V
GND

LED 0
LED 1
LED 2
LED 3
LED 4
LED 5
LED 6
LED 7

Digital
Writer

DIO 0
DIO 1
DIO 2
DIO 3
DIO 4
DIO 5
DIO 6
DIO 7

GND
Cin
B0
A0
S0
A1
B1
S1

Vcc
B2
A2
S2
B3
A3
S3
Cout

220Ω   LED