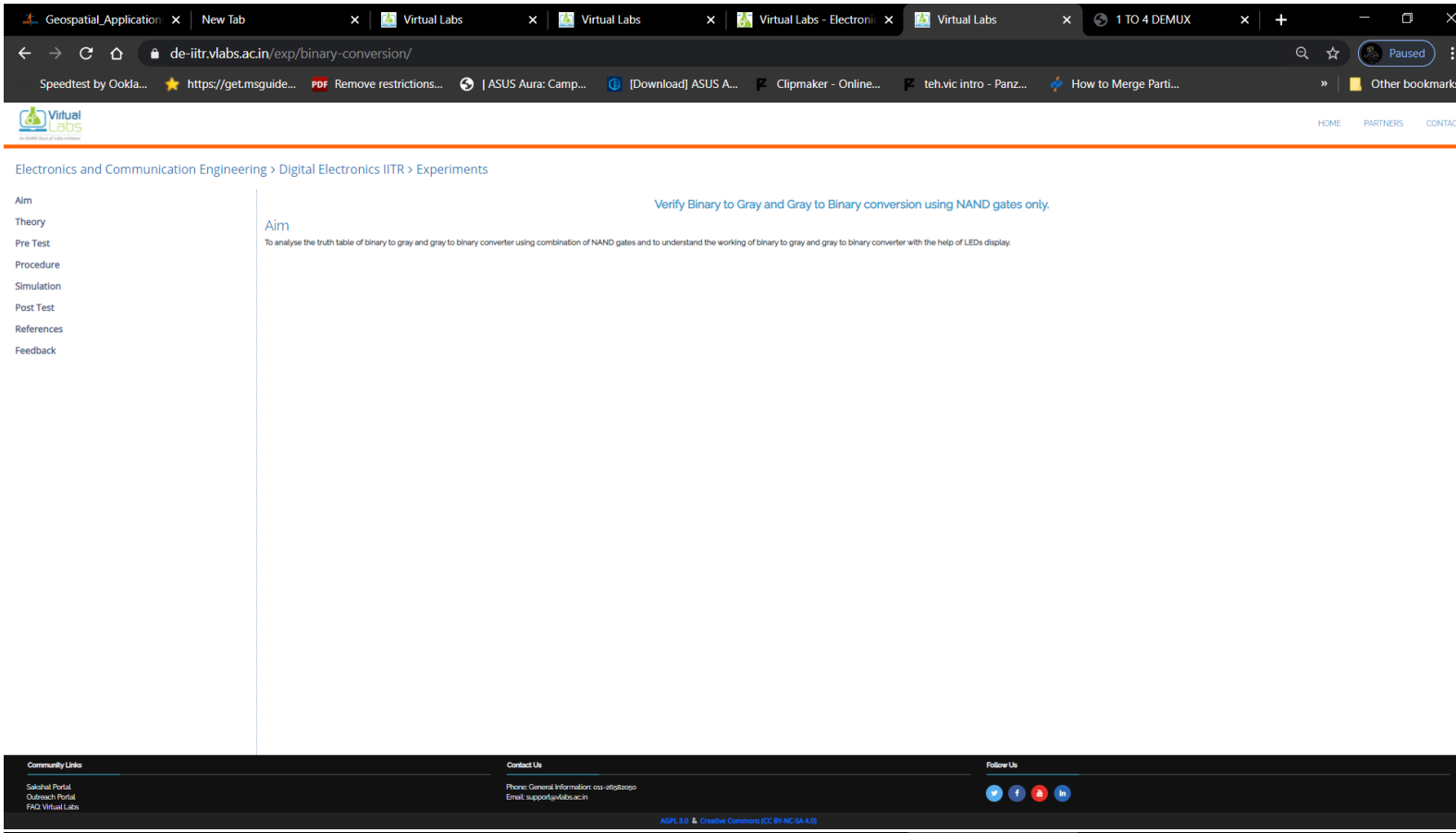
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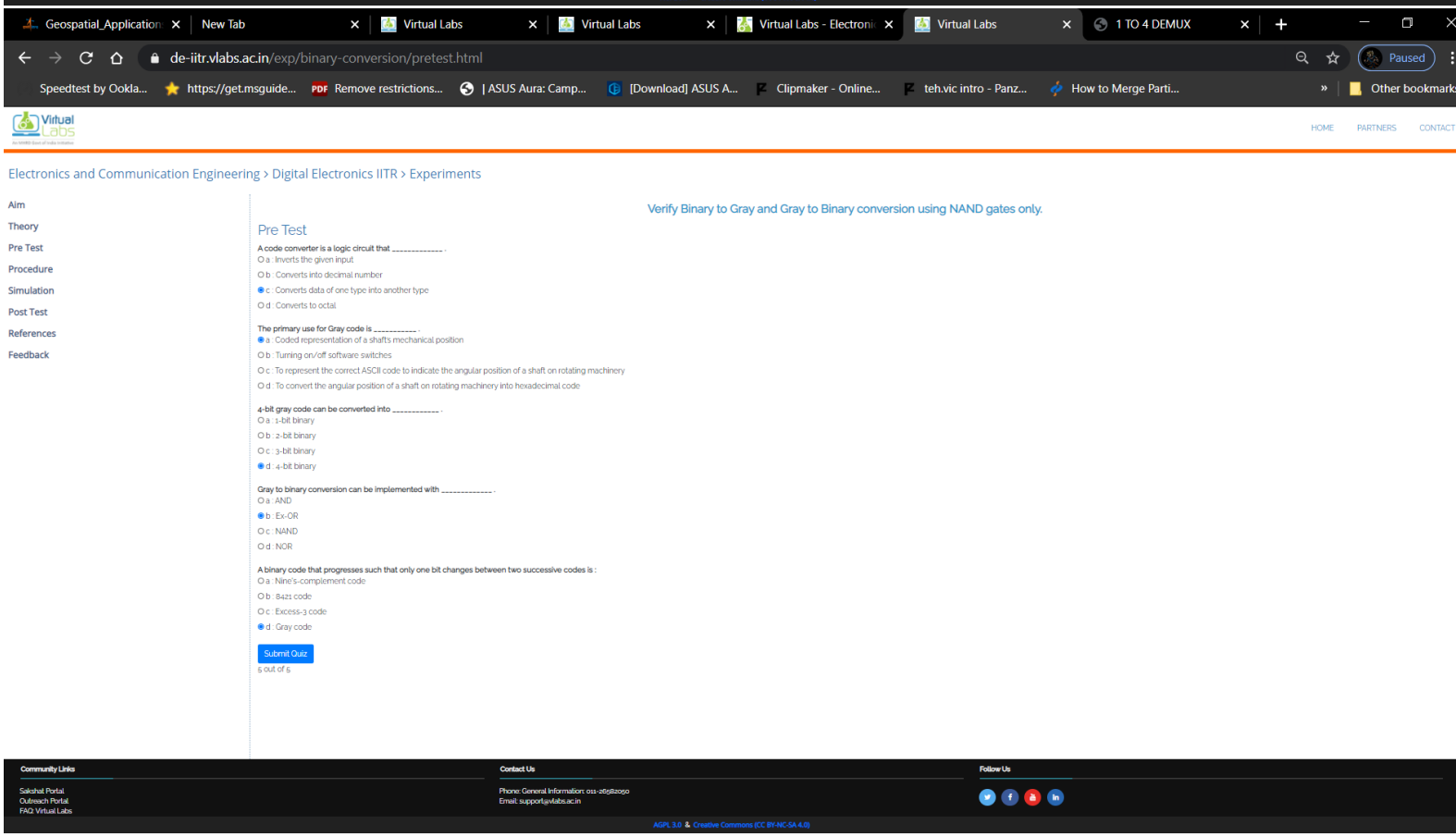
Aim
Theory
Pre Test
Procedure
Simulation
Post Test
References
Feedback
Verify Binary to Gray and Gray to Binary conversion using NAND gates only.
Aim
To analyse the truth table of binary to gray and gray to binary converter using combination of NAND gates and to understand the working of binary to gray and gray to binary converter with the help of LEDs display.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Verify Binary to Gray and Gray to Binary conversion using NAND gates only.
Pre Test
A code converter is a logic circuit that _____ .
a : Inverts the given input
b : Converts into decimal number
c : Converts data of one type into another type
d : Converts to octal
The primary use for Gray code is _____ .
a : Coded representation of a shafts mechanical position
b : Turning on/off software switches
c : To represent the correct ASCII code to indicate the angular position of a shaft on rotating machinery
d : To convert the angular position of a shaft on rotating machinery into hexadecimal code
4-bit gray code can be converted into _____ .
a : 1-bit binary
b : 2-bit binary
c : 3-bit binary
d : 4-bit binary
Gray to binary conversion can be implemented with _____ .
a : AND
b : Ex-OR
c : NAND
d : NOR
A binary code that progresses such that only one bit changes between two successive codes is :
a : Nine's-complement code
b : 8421 code
c : Excess-3 code
d : Gray code
Submit Quiz
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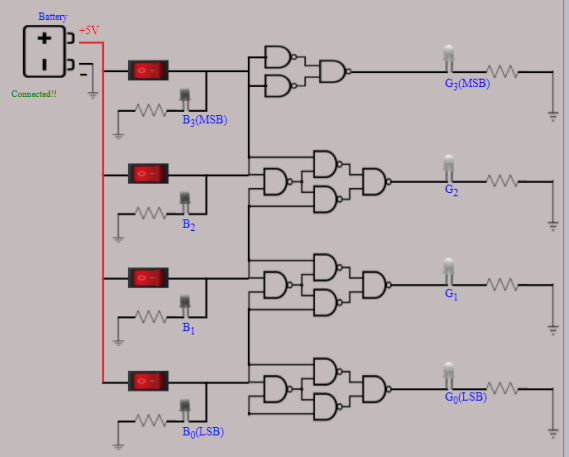

TRUTH TABLE

Add

Serial No.	Binary				Gray			
	B_3 (MSB)	B_2	B_1	B_0 (LSB)	G_3 (MSB)	G_2	G_1	G_0 (LSB)
1	0	0	0	0	0	0	0	0
2	0	0	0	1	0	0	0	1
3	0	0	1	0	0	0	1	1
4	0	1	0	0	0	1	1	0
5	1	0	0	0	1	1	0	0
6	1	1	1	1	1	0	0	0
7	0	1	1	1	0	1	0	0
8	0	0	1	1	0	0	1	0

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Construction of Gray to Binary Converter using NAND gates only

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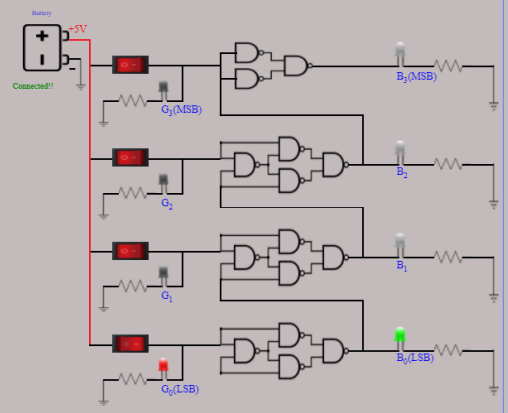
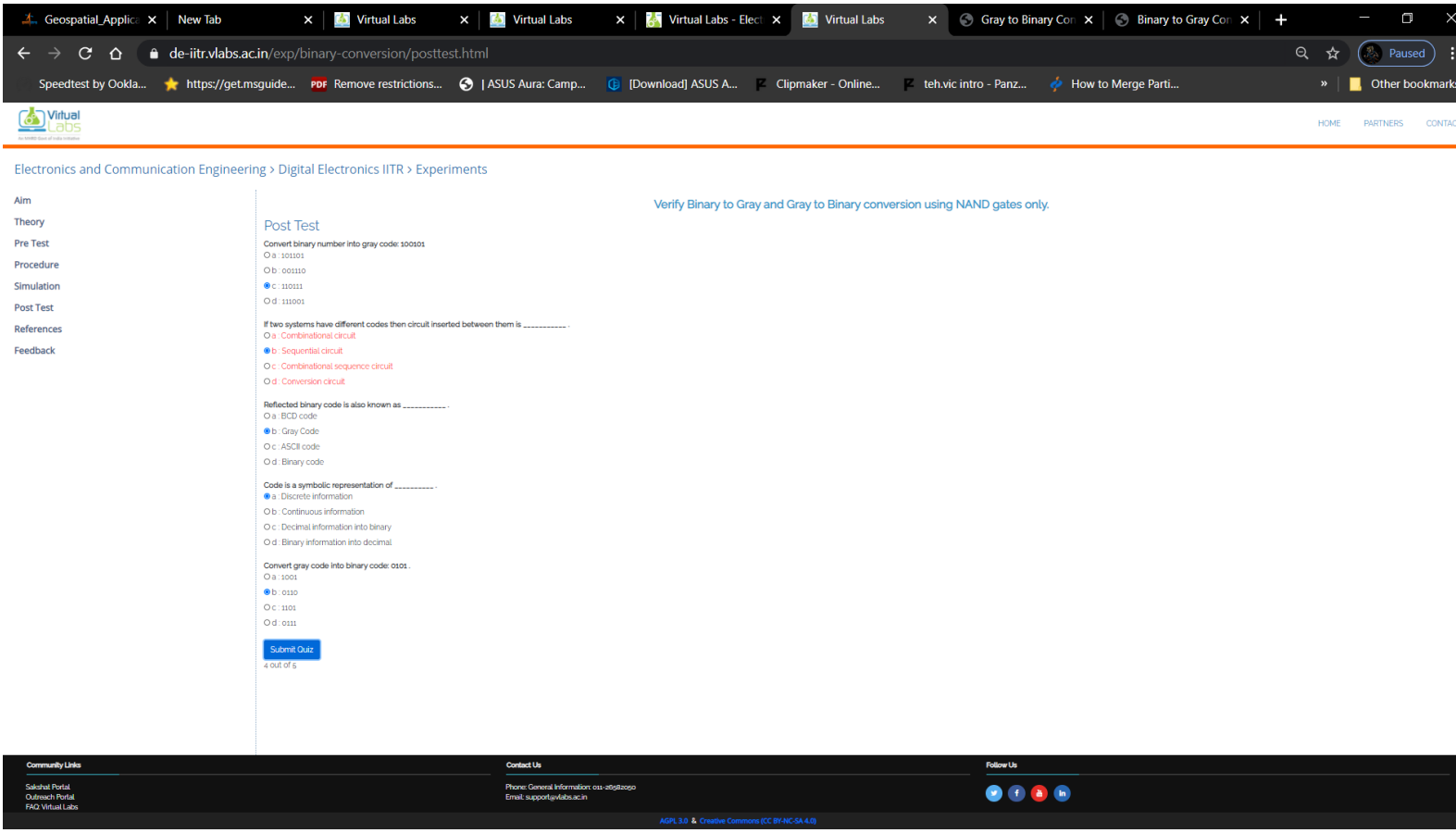


TRUTH TABLE

Add

Serial No.	Gray				Binary			
	G_3 (MSB)	G_2	G_1	G_0 (LSB)	B_3 (MSB)	B_2	B_1	B_0 (LSB)
1	0	0	0	0	0	0	0	0
2	0	0	0	1	0	0	0	1
3	0	0	1	0	0	0	1	1
4	0	1	0	0	0	1	1	1
5	1	0	0	0	1	1	1	1
6	1	1	1	1	1	0	1	0
7	0	1	1	1	0	1	0	1
8	0	0	0	1	0	0	0	1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Verify Binary to Gray and Gray to Binary conversion using NAND gates only.
Post Test
Convert binary number into gray code: 100101
a : 101101
b : 001110
c : 110111
d : 111001
If two systems have different codes then circuit inserted between them is _____ .
a : Combinational circuit
b : Sequential circuit
c : Combinational sequence circuit
d : Conversion circuit
Reflected binary code is also known as _____ .
a : BCD code
b : Gray Code
c : ASCII code
d : Binary code
Code is a symbolic representation of _____ .
a : Discrete information
b : Continuous information
c : Decimal information into binary
d : Binary information into decimal
Convert gray code into binary code: 0101 .
a : 1001
b : 0110
c : 1101
d : 0111
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