

FULL ADDER

EXP.NO: 23

AIM: To design and implement the full adder using Logisim simulator.

PROCEDURE:

- 1) Pick and place the necessary gates.
- 2) Insert 3 inputs into the canvas.
- 3) Connect the inputs to the XOR gate, AND gate and OR gate.
- 4) Insert 2 outputs into the canvas.
- 5) Make the connections using the connecting wires.
- 6) Verify the truth table.

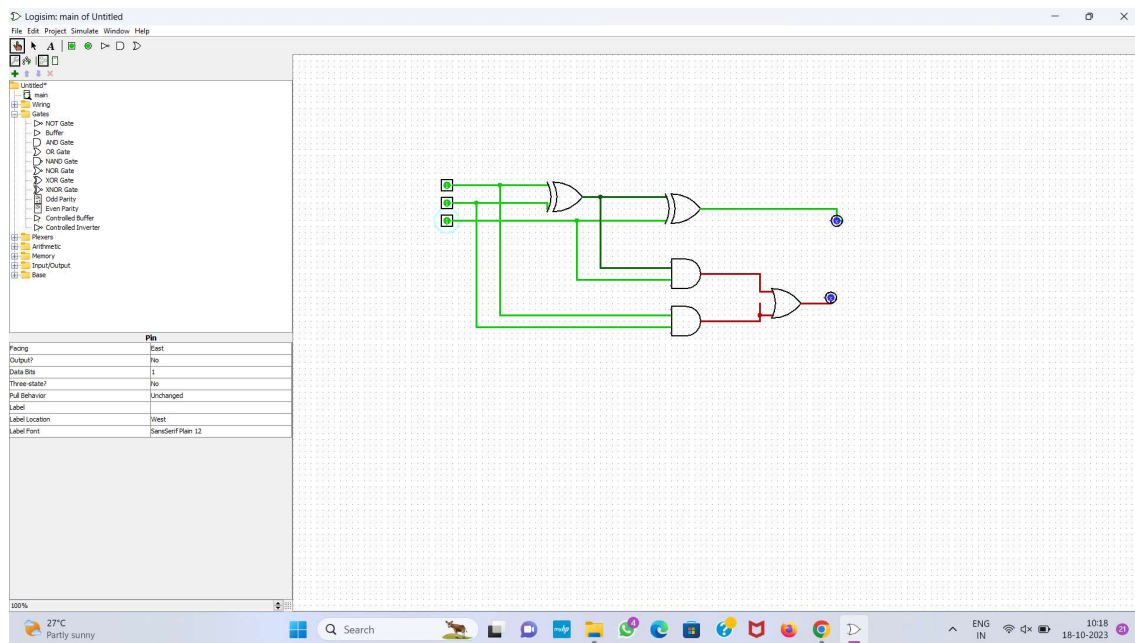
TRUTH TABLE:

A	B	C	Sum	Carry
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

$$\text{Sum} = (A \oplus B) \oplus C$$

$$\text{Carry} = A.B + (A \oplus B).C$$

OUTPUT



RESULT: Thus full adder has been designed and implemented successfully using logisim simulator.