

AIM:

To design and implement the two bit half subtractor
Using Logisim simulator.

PROCEDURE:

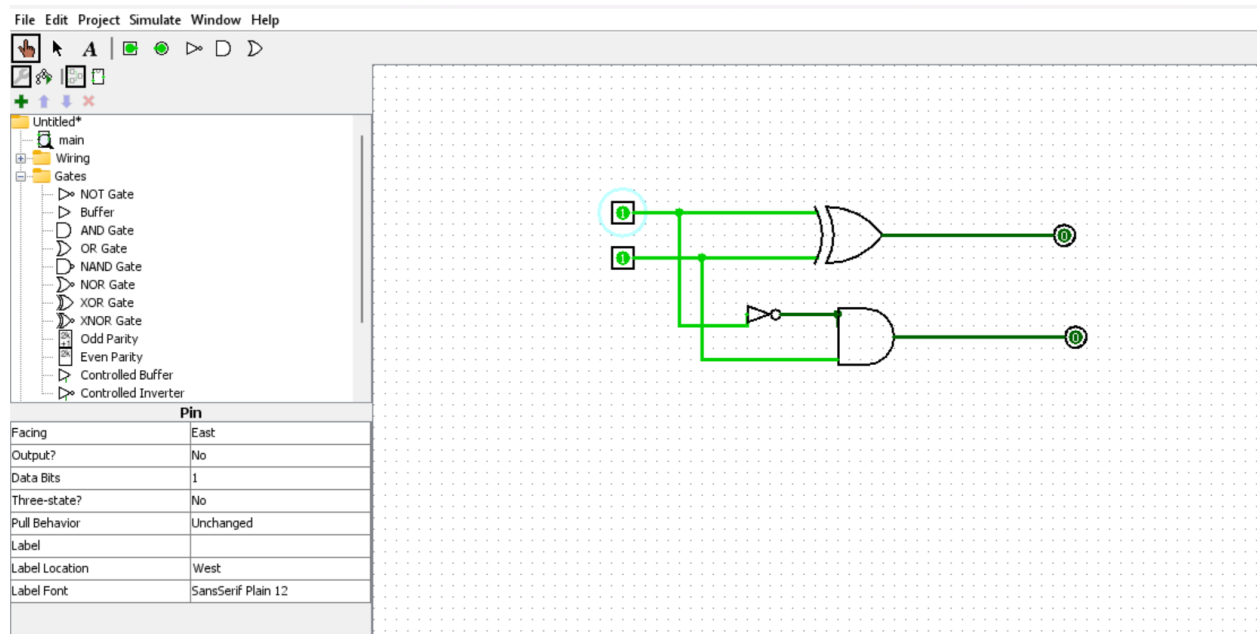
- 1) Pick and place the necessary gates.
- 2) Insert 2
inputs into the canvas.
- 3) Connect
the inputs to the OR gate, AND gate and NOT gate.
- 4) Insert
2 outputs into the canvas.
- 5)
Make the connections using the
connecting wires.
- 6) Verify the truth table.

TRUTH TABLE:

$$\text{Diff} = A'B + AB'$$

$$\text{Borrow} = A'B$$

OUTPUT



RESULT: Thus 2-bit half subtractor has been designed and implemented successfully using logisim simulator