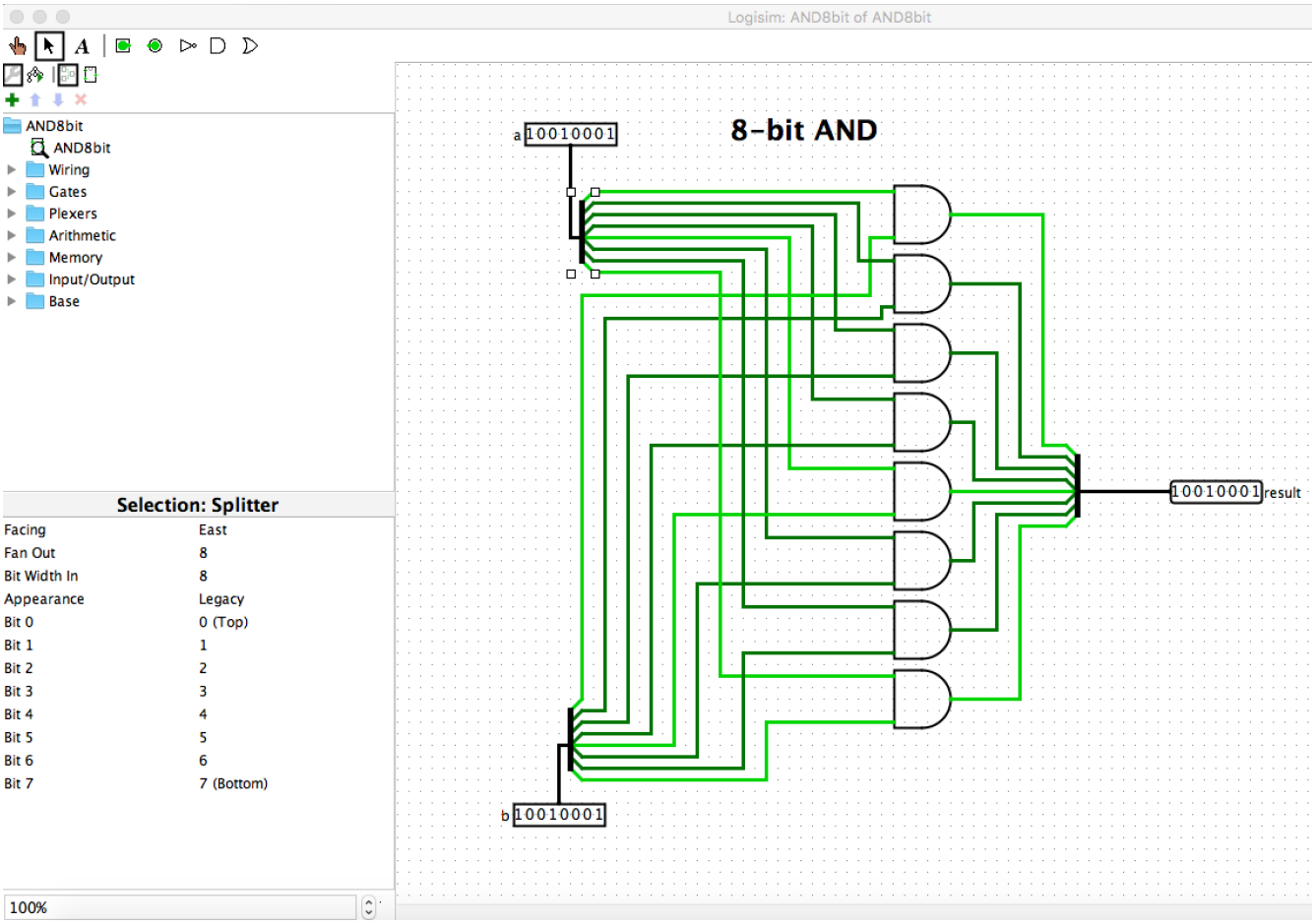
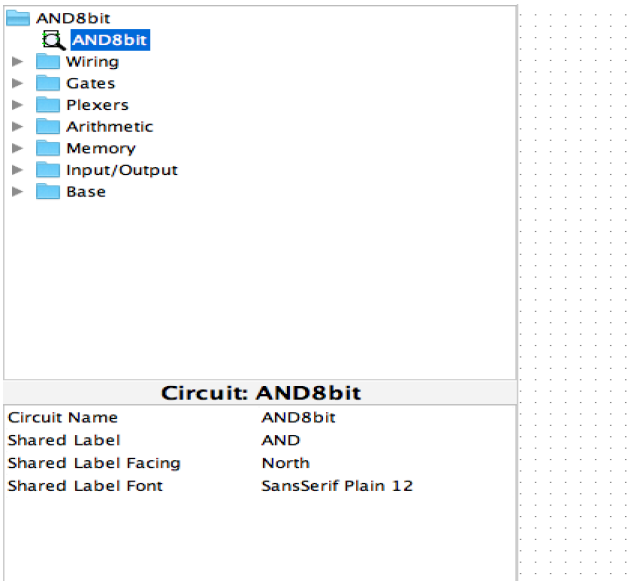
ASDV 1205, Intro to IT
Lab, 8-bit AND and 8-bit OR

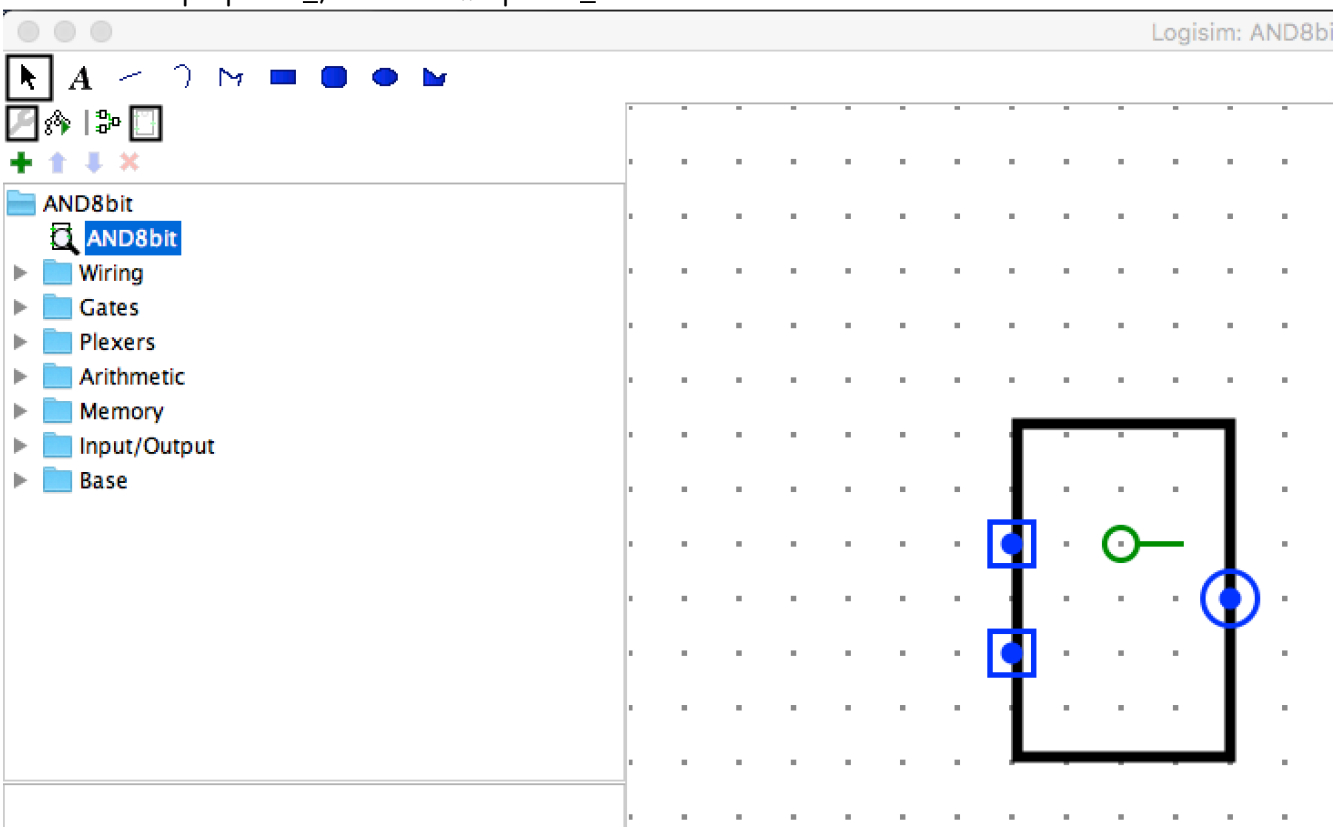
Design the 8-bit ANDer shown. Every AND gate is 1-bit width an she ANDs 2 bits matching in significance from input **a** and input b. Thar is, the top AND gate ANDs the least significant bit of input **a** with the least significant bit of input b . Look ta the Splitter's specifications at the lower left of the figure below. Name the circuit AND8bit (not main) and save it with that name.



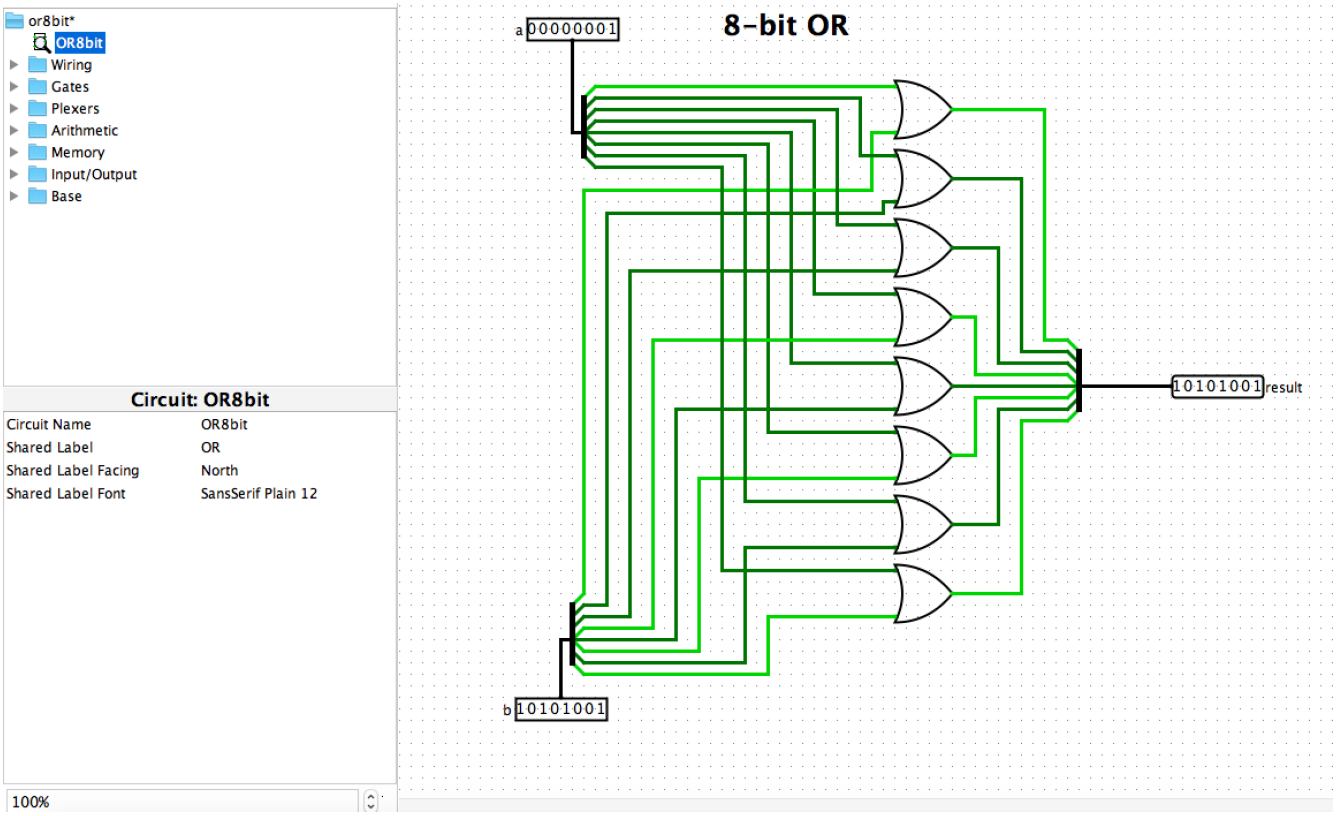
2. Click anywhere in the dots of the beard-box and on the left type in Shared Label AND, Facing North as shown below. This label will appear only when the AND chip appears(used) in another circuit, And we will use the 8-bit-AND to design the ALU.



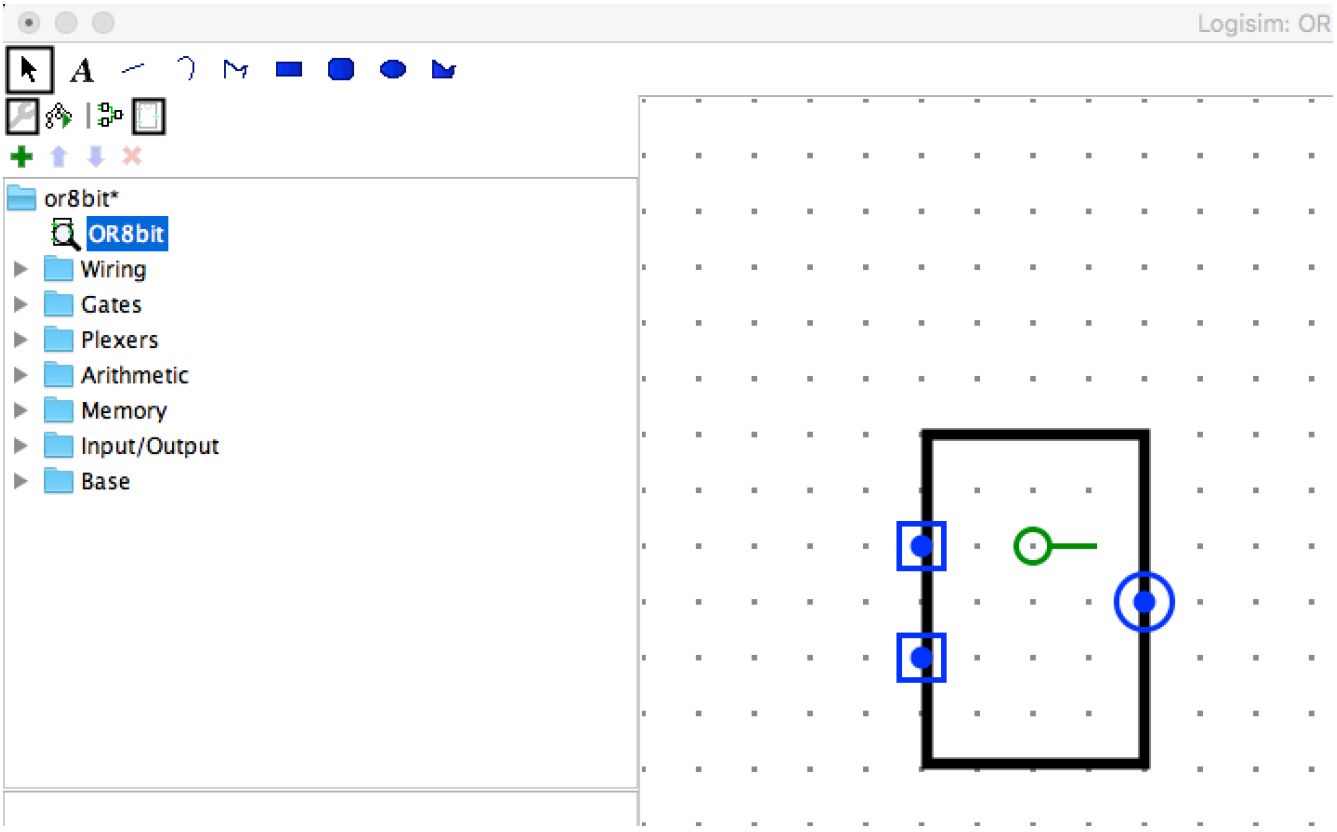
3. Create the chip for the 8-bit AND. Width 5, Height 7, Exactly as shown below. Put no labels in it. The top input is **a**, the bottom input is **b**



4. Design the 8-bit ORer shown below: Name it OR8bit and save it as OR8bit. It Hared Label is OR and faces North as you did in the 8-bitAND.



5. Create its 5x7 8-bit OR chip as you did with the 8-bit-AND. The top input of the chip is a



6. Click File > New. Load the AND8bit and the OR8bit circuits and test them for multiple inputs **a** and **b**.

7. Put the value 10 in input **a** , and the value 8 in input b. **Upload the circuit aIs10bIs8.jpg**.