

ALU Block Diagram

A simple functional overview of the 4-bit ALU.

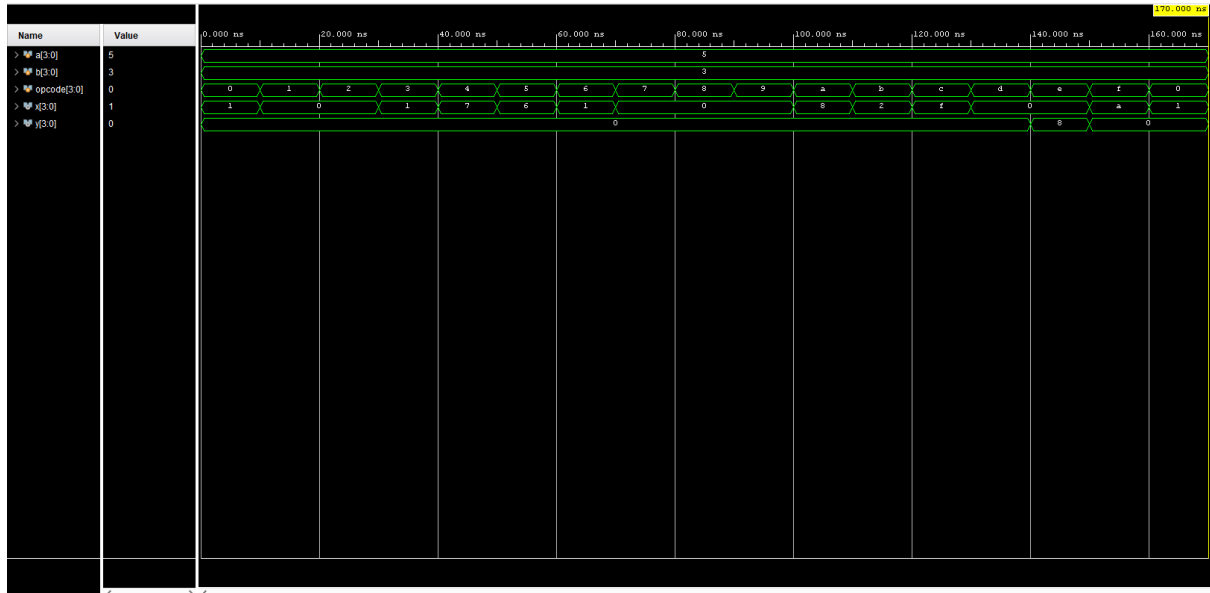


Diagram Description:

- Two 4-bit inputs: A and B
- One 4-bit control input: Opcode
- Two outputs:
 - X → Main operation result (4-bit)
 - Y → Carry or extended result (4-bit)
- Combinational logic selects the result based on the opcode.