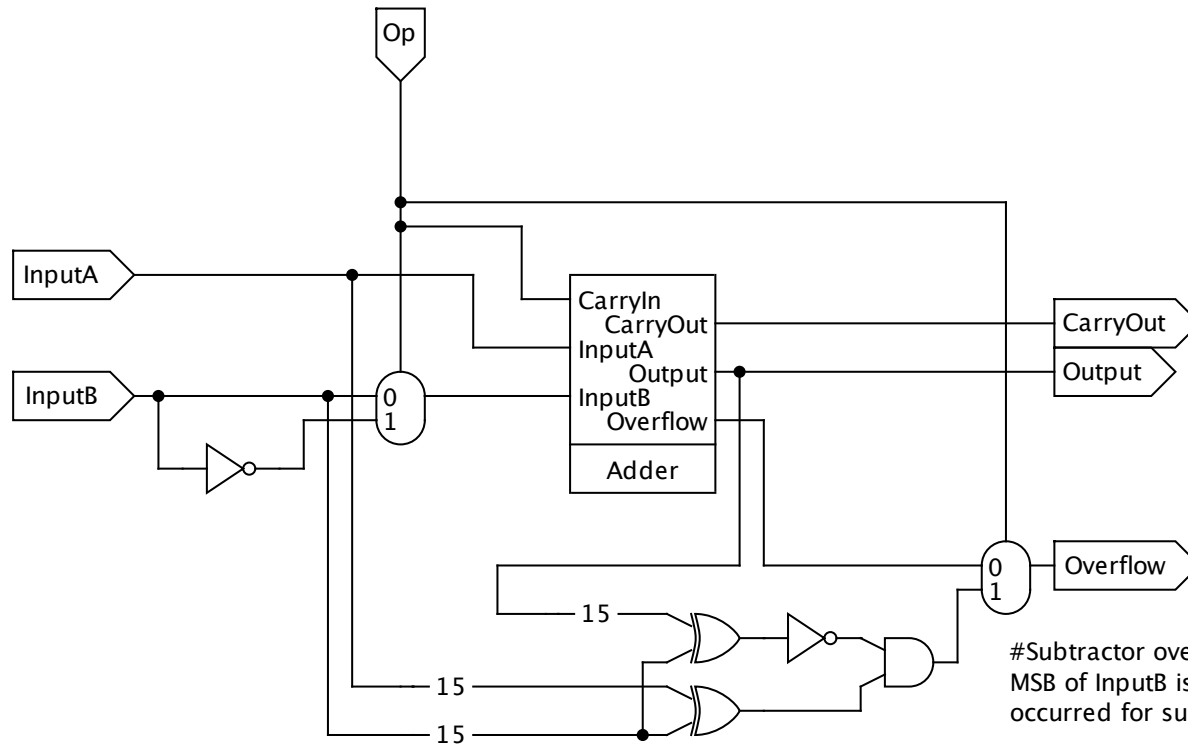# SignedAddSubtract_16bit

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SignedAddSubtract_16bit.jls
Build an ALU using JLS
September 21, 2015

#For addition, use inputA and inputB directly and use Op=0 as CarryIn to Adder

#For subtraction, invert InputB and use Op=1 as CarryIn to Adder

Op

InputA

InputB

CarryIn
CarryOut
InputA
Output
InputB
Overflow

Adder

CarryOut

Output

0
1

Overflow

15

15

15

0
1

#Subtractor overflow: if MSB of InputA and InputB differ and the MSB of InputB is the same as the MSB of output, then overflow occurred for subtraction