OAKLAND UNIVERSITY.

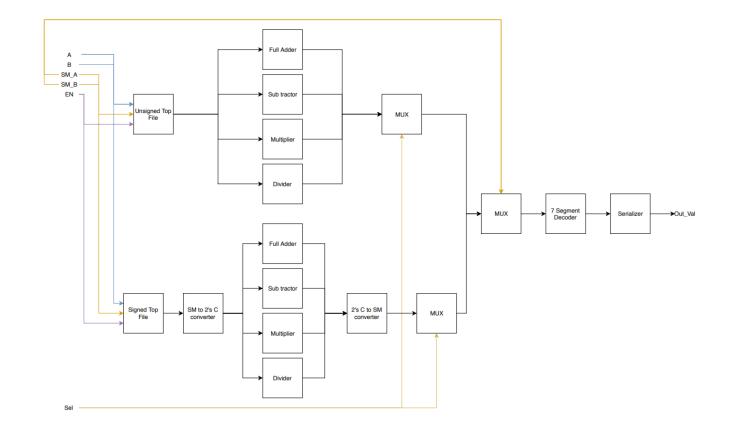


Binary Calculator

Tod Rocco, Connor Willcock, Scotty Knight, Bradely Pfeiffer

Flow Diagram





Overall Top

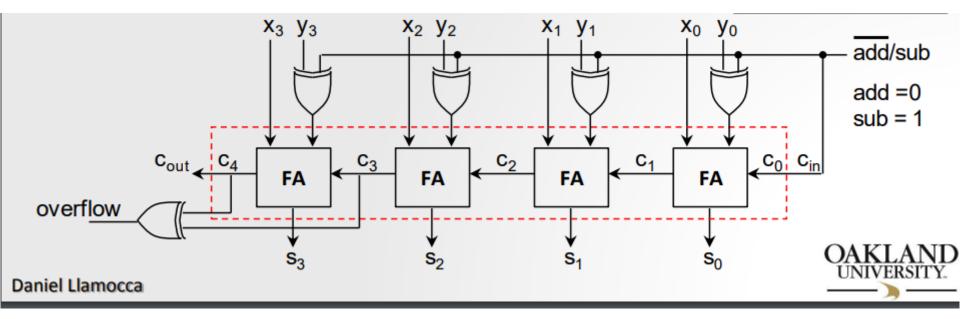


- Unsigned Top File
- Signed Top File
- Multiplexer
- Decoder
- Serializer

Unsigned Top



- Full Adder
- Subtractor
- Multiplier
- Divider
- Multiplexer



Adder



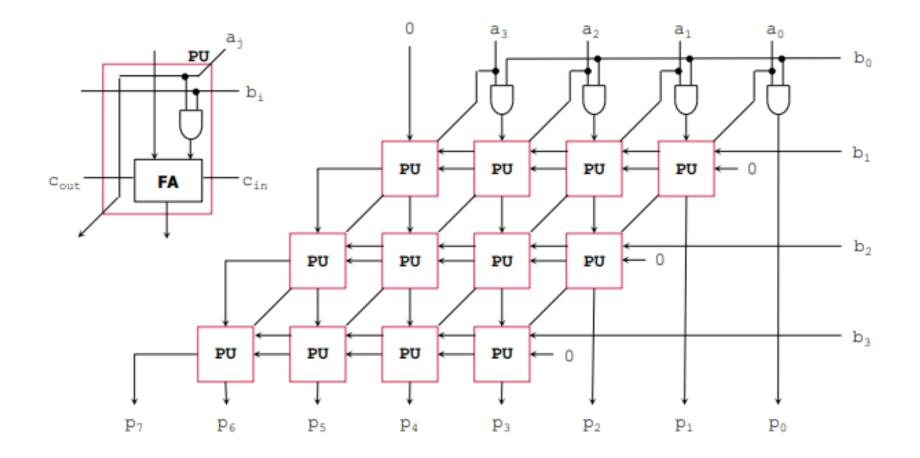
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Subtractor



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Multiplier

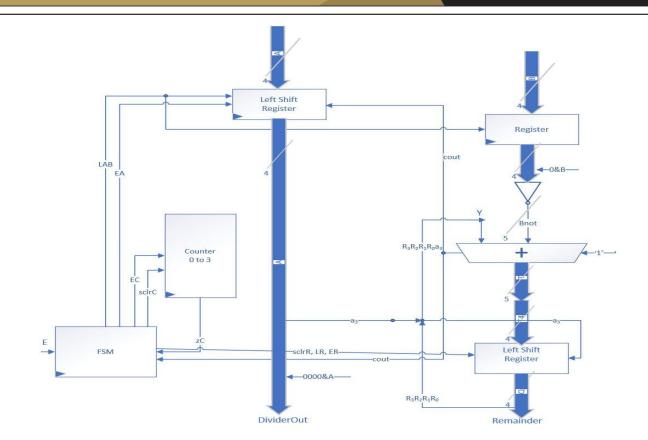


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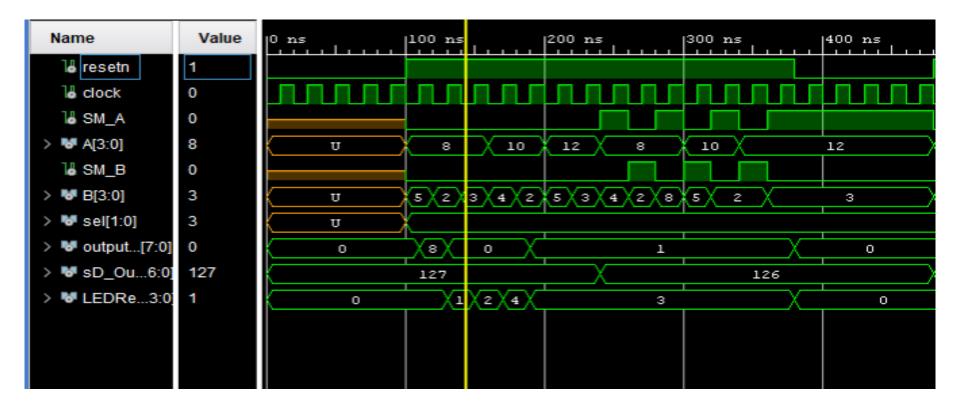
Divider





Divider





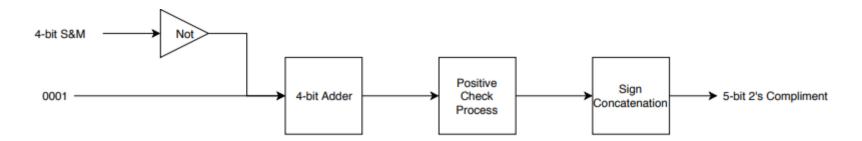
Signed Top



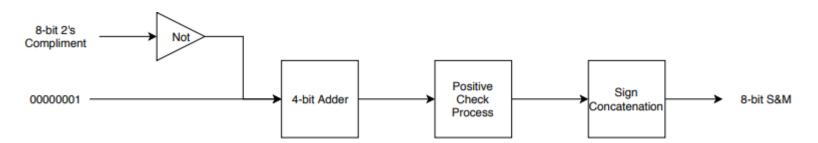
- Sign and Magnitude to 2's Complement
- Full Adder
- 2's Complement to Sign and Magnitude
- Subtractor
- 2's Complement to Sign and Magnitude
- Multiplier
- Divider
- Multiplexer

Convertors





Sign and Magnitude -> 2's Complement



2's Complement -> Sign and Magnitude

Adder



topfile.vhd × Signed_Top_File.vhd × Final_Project_TB.vhd	d x Overall_Top_File.vhd	× Full_Adder.vhd	× Final_Project_TB_behav.wcfg*
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Subtractor



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Multiplier

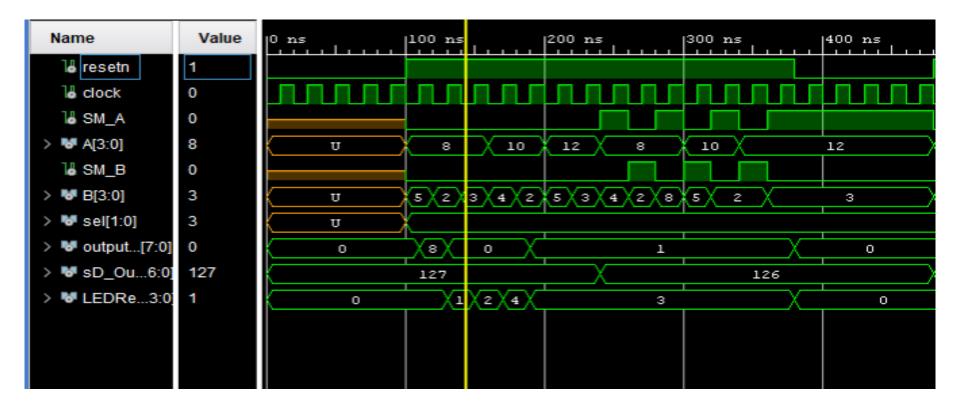


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Divider





Conclusions



- All parts were successfully implemented into the calculator
- Biggest challenge was configuring signed sections
- Next steps could be to make the user interface easier by connecting a keyboard for input





???

Demo



