

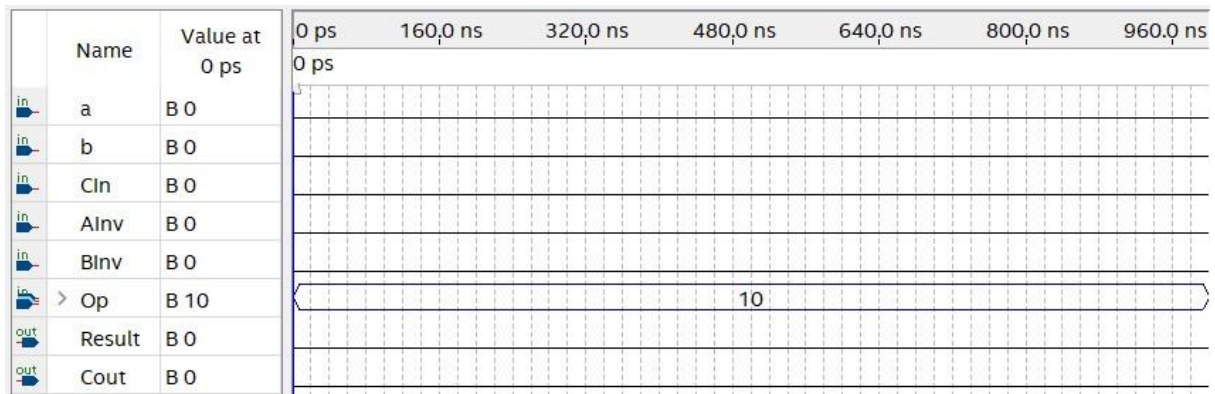
Δημήτρης Τουμαζάτος, 3210199, p3210199@aueb.gr

Δημήτρης Φωτογιαννόπουλος, 3210214, p3210214@aueb.gr

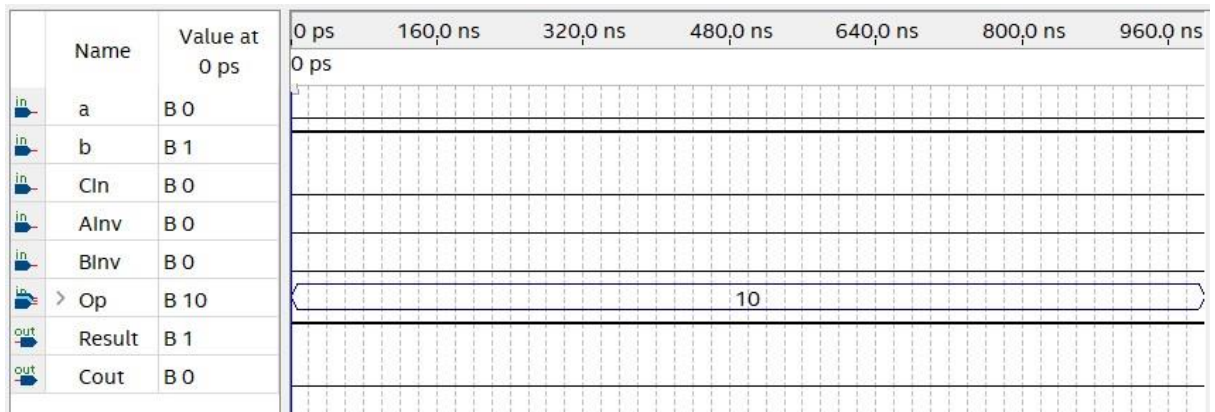
Αλέξιος Παπαδόπουλος-Σιούντης, 3210154, p3210154@aueb.gr

1-Bit ALU

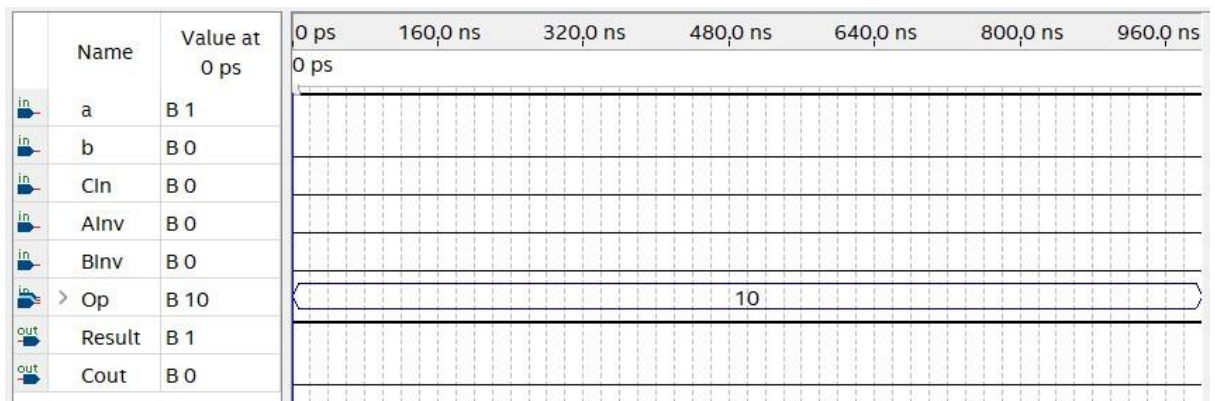
ADD 00



ADD 01



ADD 10



ADD 11

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
in	a	B 1	0 ps						
in	b	B 1							
in	CIn	B 0							
in	AInv	B 0							
in	BInv	B 0							
in	> Op	B 10				10			
out	Result	B 0							
out	Cout	B 1							

AND 00

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
in	a	B 0	0 ps						
in	b	B 0							
in	CIn	B 0							
in	AInv	B 0							
in	BInv	B 0							
in	> Op	B 00				00			
out	Result	B 0							
out	Cout	B 0							

AND 01

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
in	a	B 0	0 ps						
in	b	B 1							
in	CIn	B 0							
in	AInv	B 0							
in	BInv	B 0							
in	> Op	B 00				00			
out	Result	B 0							
out	Cout	B 0							

AND 10

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
in	a	B 1	0 ps						
in	b	B 0							
in	CIn	B 0							
in	Alnv	B 0							
in	Blnv	B 0							
in	> Op	B 00				00			
out	Result	B 0							
out	Cout	B 0							

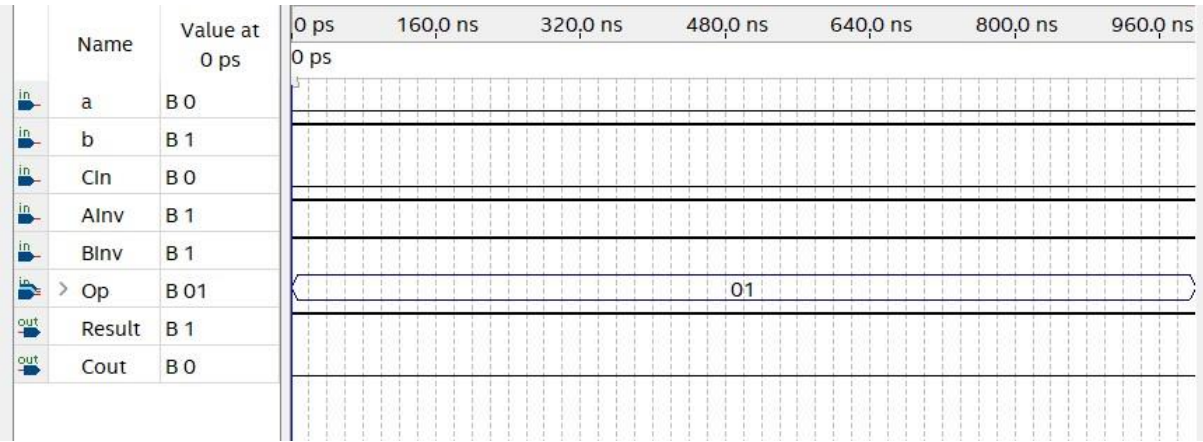
AND 11

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
in	a	B 1	0 ps						
in	b	B 1							
in	CIn	B 0							
in	Alnv	B 0							
in	Blnv	B 0							
in	> Op	B 00				00			
out	Result	B 1							
out	Cout	B 1							

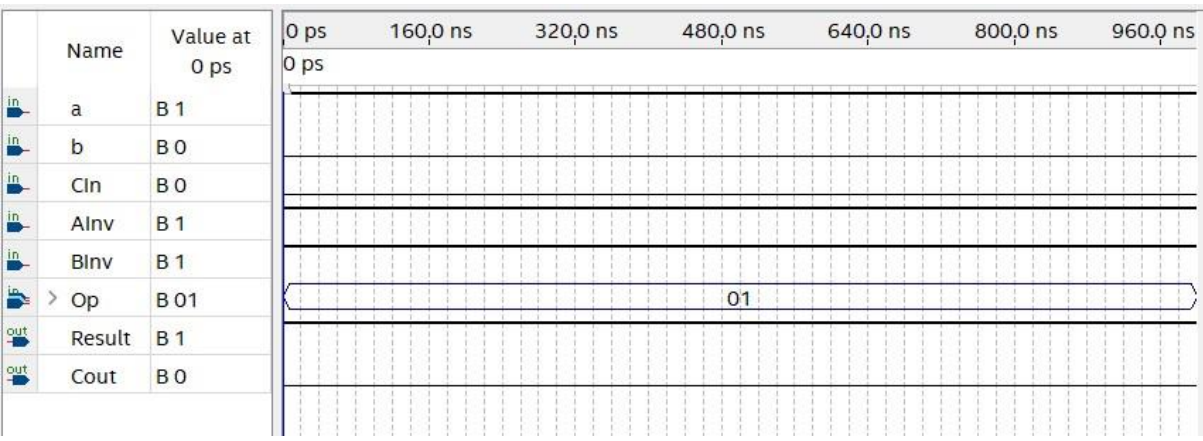
NAND 00

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
in	a	B 0	0 ps						
in	b	B 0							
in	CIn	B 0							
in	Alnv	B 1							
in	Blnv	B 1							
in	> Op	B 01				01			
out	Result	B 1							
out	Cout	B 1							

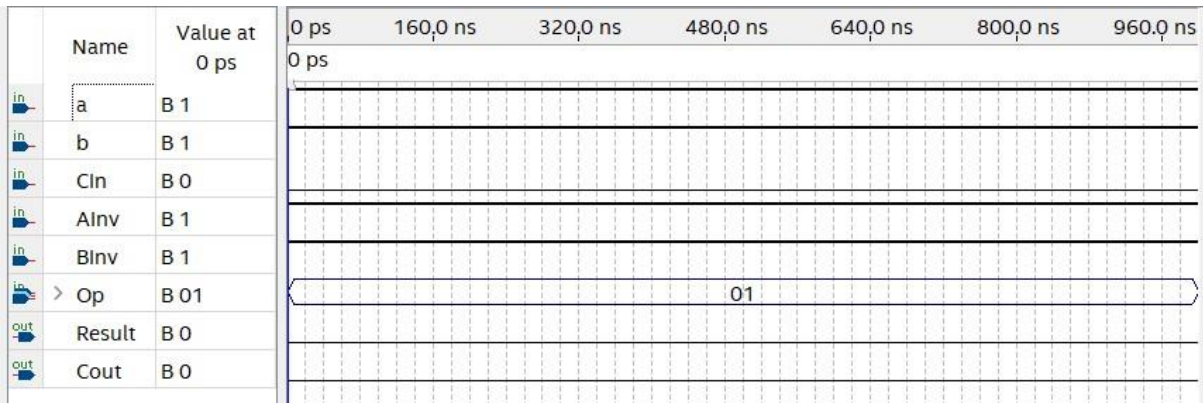
NAND 01



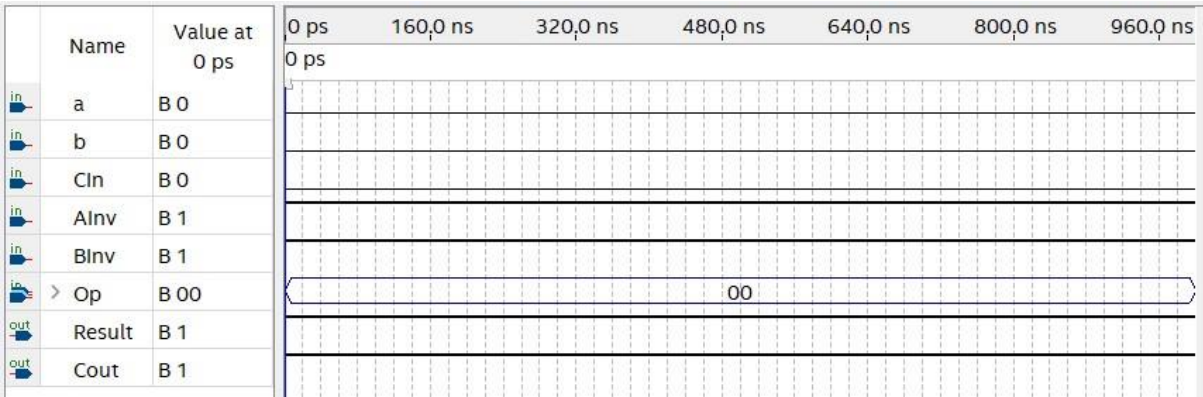
NAND 10



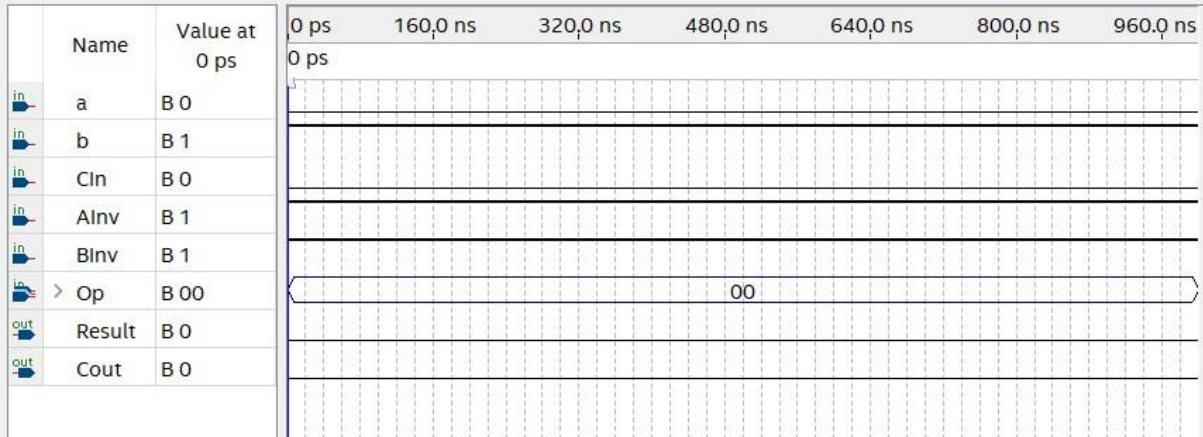
NAND 11



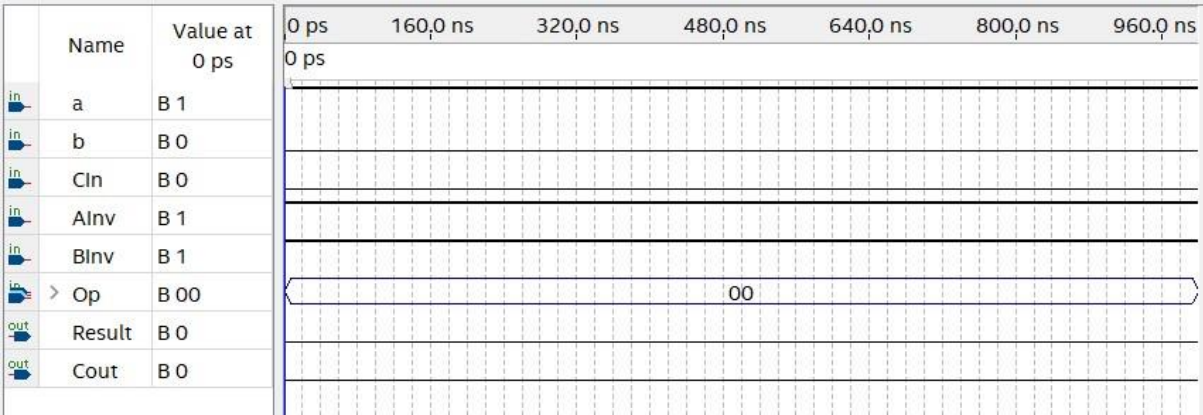
NOR 00



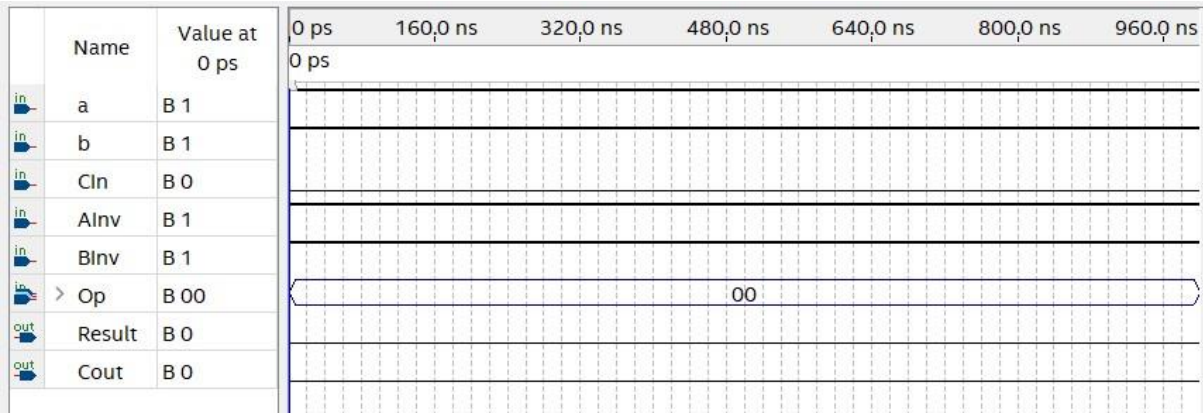
NOR 01



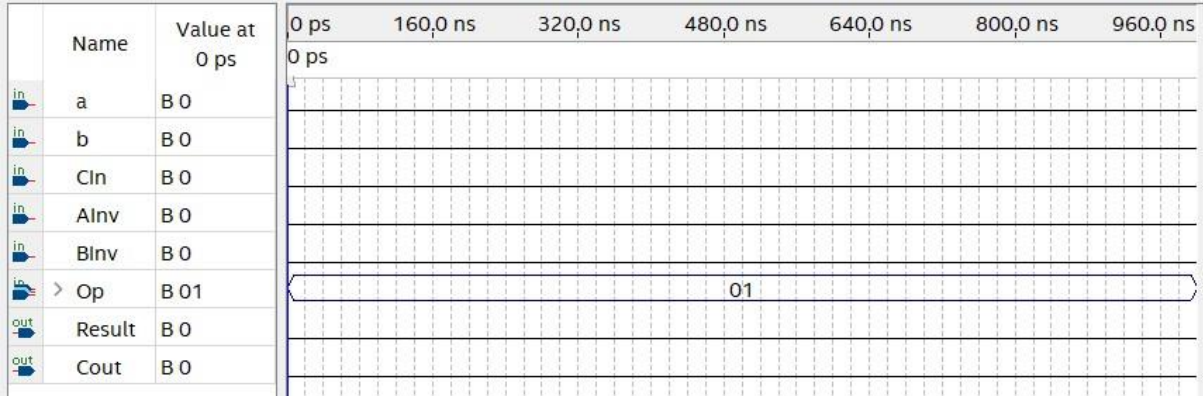
NOR 10



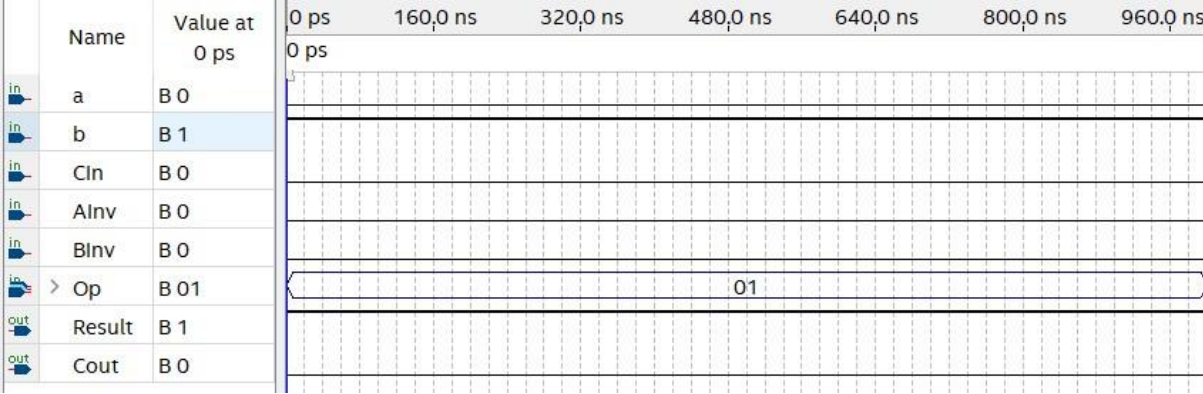
NOR 11



OR 00



OR 01



OR 10

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
			0 ps						
in	a	B 1							
in	b	B 0							
in	CIn	B 0							
in	AInv	B 0							
in	BInv	B 0							
in	> Op	B 01				01			
out	Result	B 1							
out	Cout	B 0							

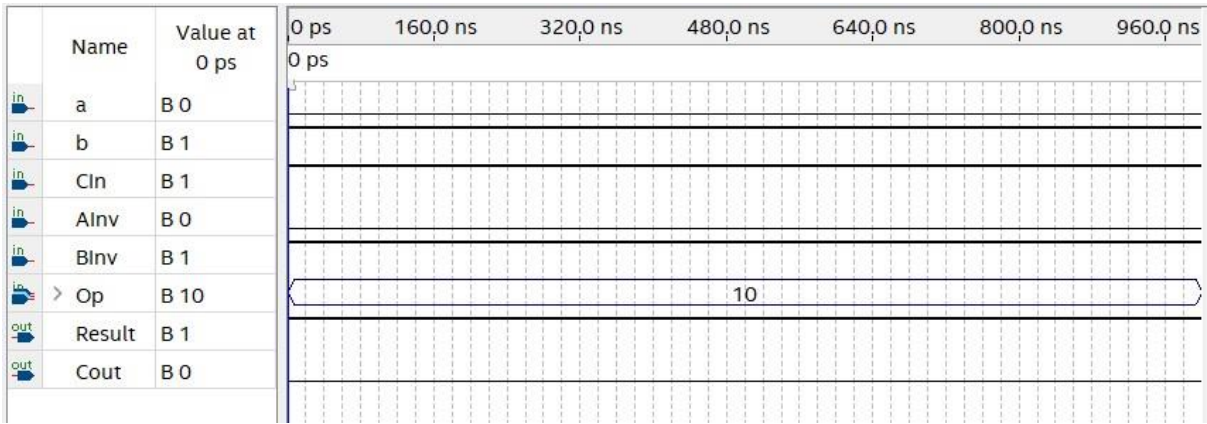
OR 11

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
			0 ps						
in	a	B 1							
in	b	B 1							
in	CIn	B 0							
in	AInv	B 0							
in	BInv	B 0							
in	> Op	B 01				01			
out	Result	B 1							
out	Cout	B 1							

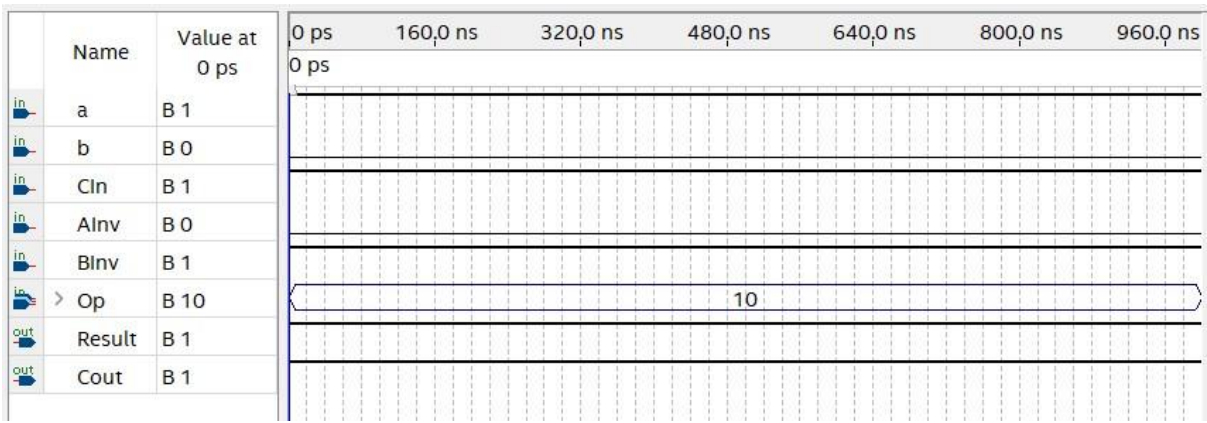
SUB 00

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
			0 ps						
in	a	B 0							
in	b	B 0							
in	CIn	B 1							
in	AInv	B 0							
in	BInv	B 1							
in	> Op	B 10				10			
out	Result	B 0							
out	Cout	B 1							

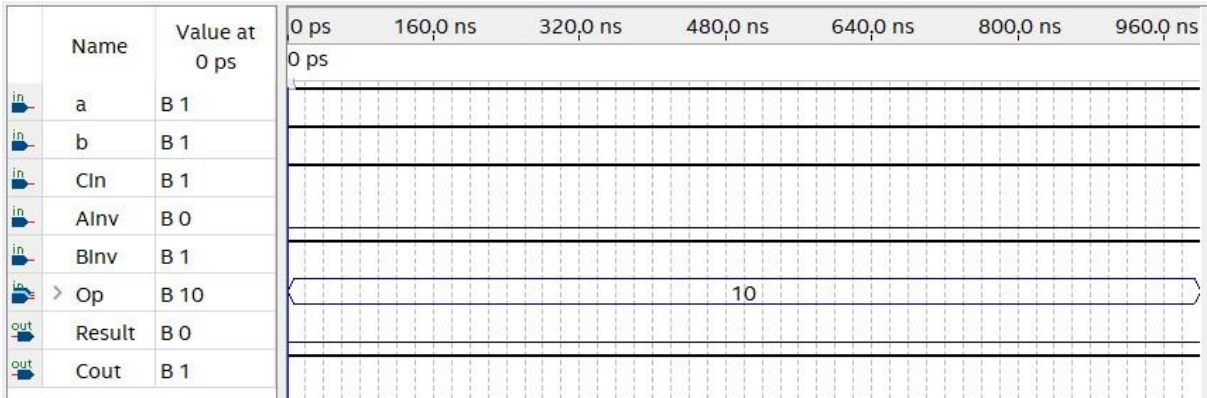
SUB 01



SUB 10




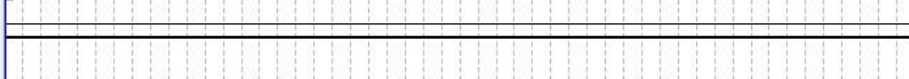







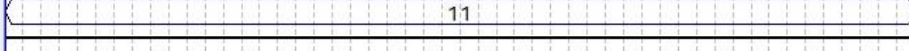
SUB 11











XOR 00

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
in	a	B 0							
in	b	B 0							
in	CIn	B 0							
in	ALnv	B 0							
in	BLnv	B 0							
io	> Op	B 11	11						
out	Result	B 0							
out	Cout	B 0							









XOR 01

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
	a	B 0							
	b	B 1							
	CIn	B 0							
	Alnv	B 0							
	Blnv	B 0							
	> Op	B 11							
	Result	B 1							
	Cout	B 0							

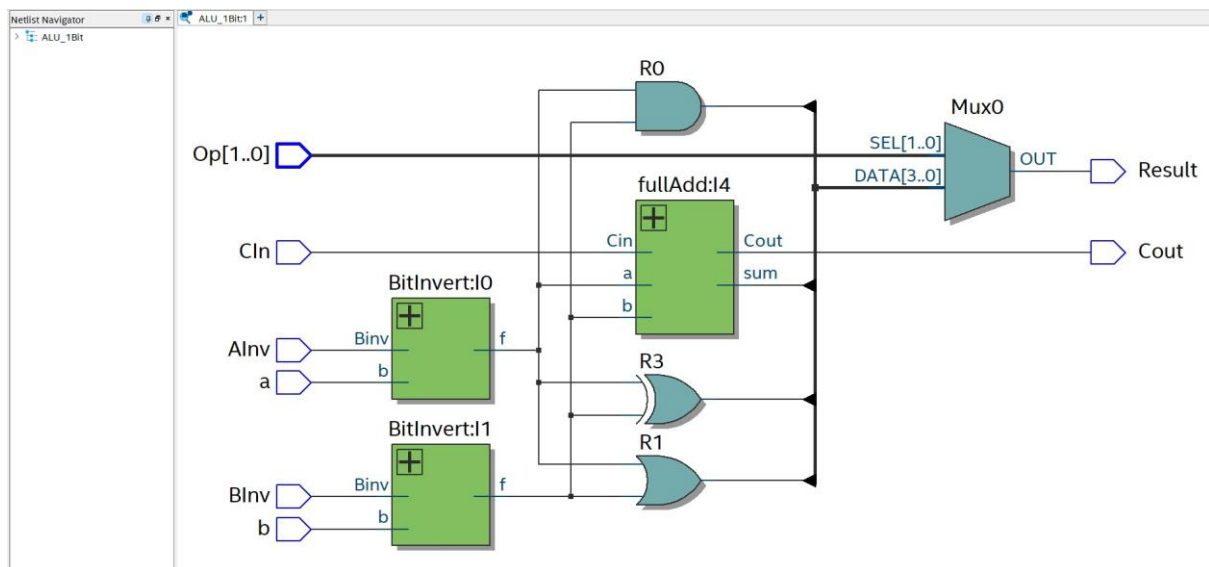
XOR 10

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
	a	B 1							
	b	B 0							
	CIn	B 0							
	Alnv	B 0							
	Blnv	B 0							
	> Op	B 11	11						
	Result	B 1							
	Cout	B 0							

XOR 11

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
	a	B 1							
	b	B 1							
	Cin	B 0							
	AInv	B 0							
	BInv	B 0							
	> Op	B 11	11						
	Result	B 0							
	Cout	B 1							

RTL VIEWER



16-Bit ALU

ADD

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
	> a	B 001001...	0010011100011100						
	> b	B 011011...	0110110011001101						
	> Opcode	B 010	010						
	> Result	B 100100...	1001001111101001						
	Overfl...	B 1							

AND

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
			0 ps						
in	> a	B 010101...				0101010101010001			
in	> b	B 111101...				1111010101010001			
in	> Opcode	B 000				000			
out	> Result	B 010101...				0101010101010001			
out	Overfl...	B 0							

NAND

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
			0 ps						
in	> a	B 100100...				1001001100001010			
in	> b	B 101100...				1011001100101100			
in	> Opcode	B 101				101			
out	> Result	B 011011...				0110110011110111			
out	Overfl...	B 1							

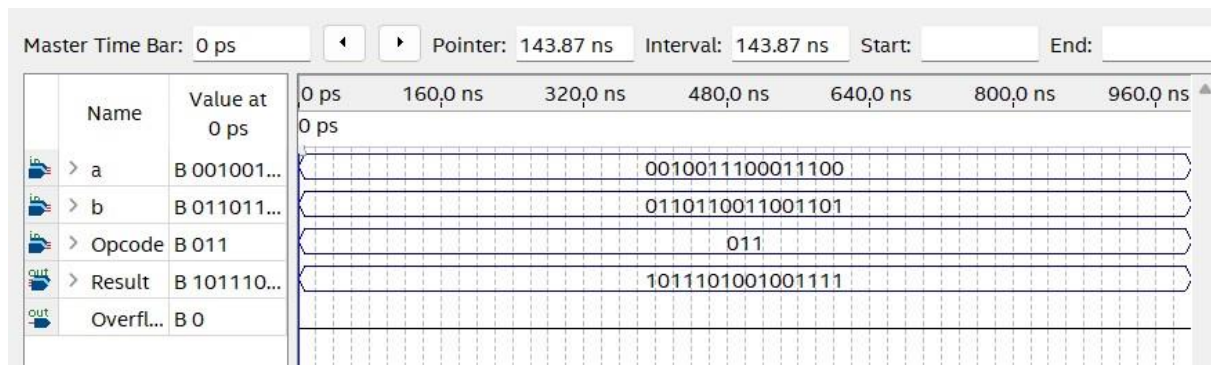
NOR

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
			0 ps						
in	> a	B 100100...				1001001100001010			
in	> b	B 101100...				1011001100101100			
in	> Opcode	B 100				100			
out	> Result	B 010011...				0100110011010001			
out	Overfl...	B 1							

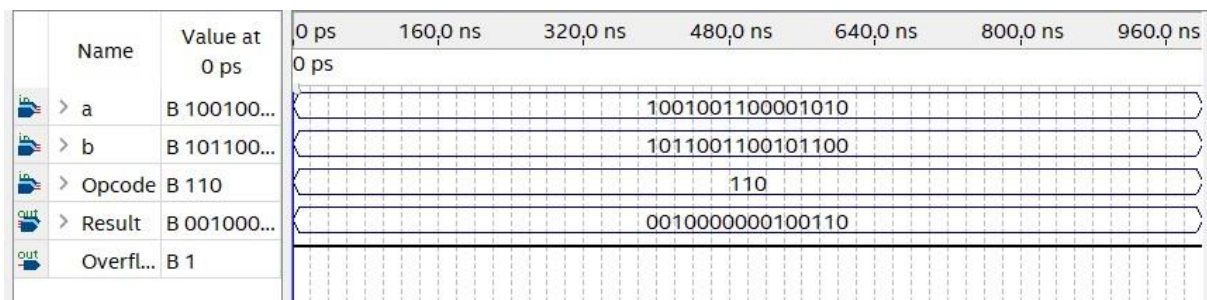
OR

	Name	Value at 0 ps	0 ps	160,0 ns	320,0 ns	480,0 ns	640,0 ns	800,0 ns	960,0 ns
			0 ps						
in	> a	B 010101...				0101010101010001			
in	> b	B 111101...				1111010101010001			
in	> Opcode	B 001				001			
out	> Result	B 111101...				1111010101010001			
out	Overfl...	B 0							

SUB



XOR



RTL VIEWER

