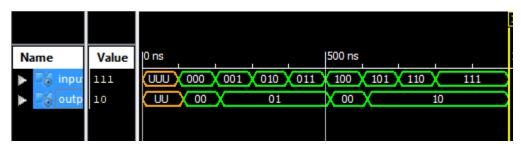
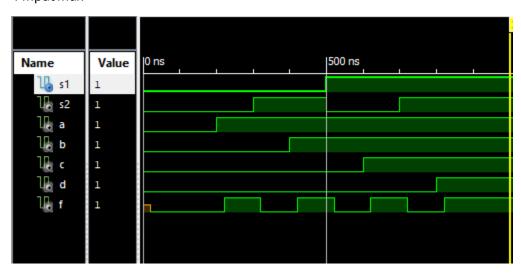
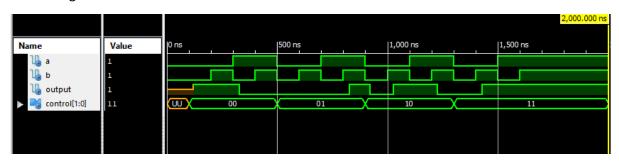
# Shift Control Logic



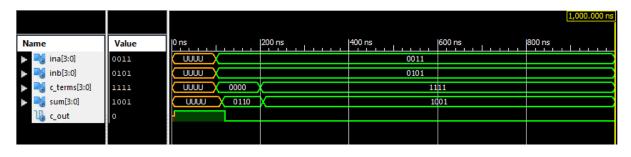
# 4 input mux



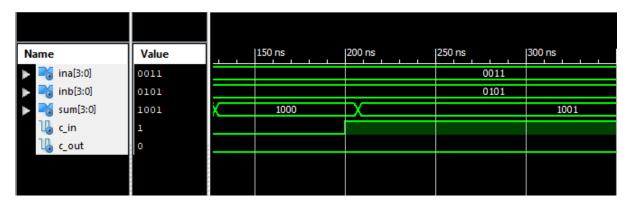
# One bit logic slice



### **Nbit** adder



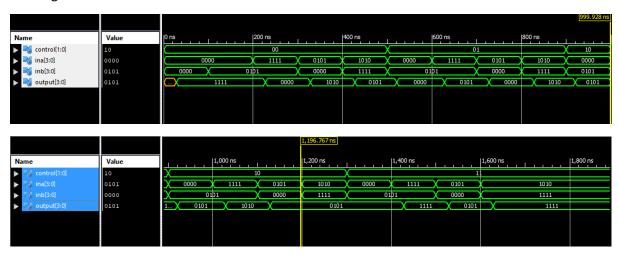
#### Fourbit lac adder



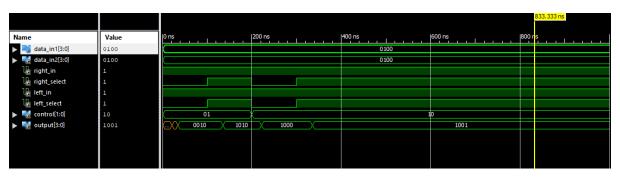
#### Nbit\_two\_input multiplexer

Name	Value	50 ns	100 ns	150 ns	200 ns	250 ns	300 ns	350 ns
To control	1							
▶ 😽 ina[3:0]	0011	0000	х			001	1	
▶ <b>■</b> inb[3:0]	0101	0000	X			010	1	
output[3:0]	0101	0000	X	0011	_XX			0101

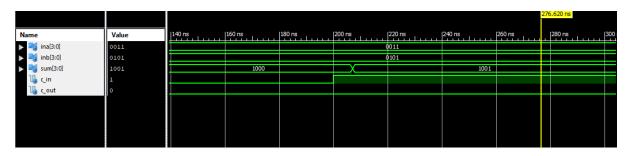
# **Nbit logic unit**



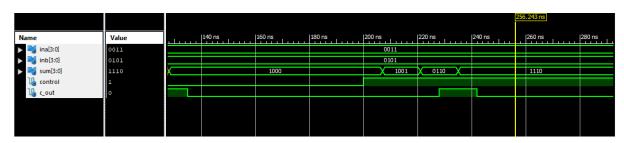
### Shift rotate



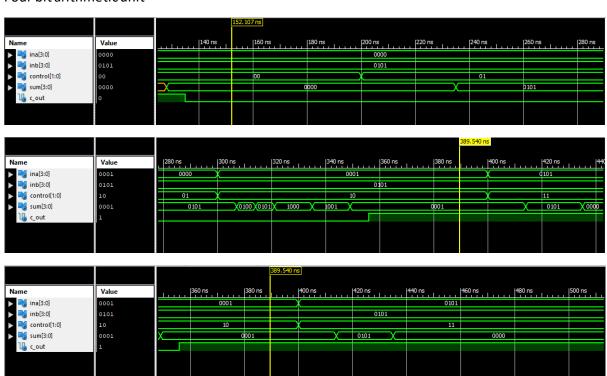
#### Four bit lac adder



#### Four bit adder subtractor

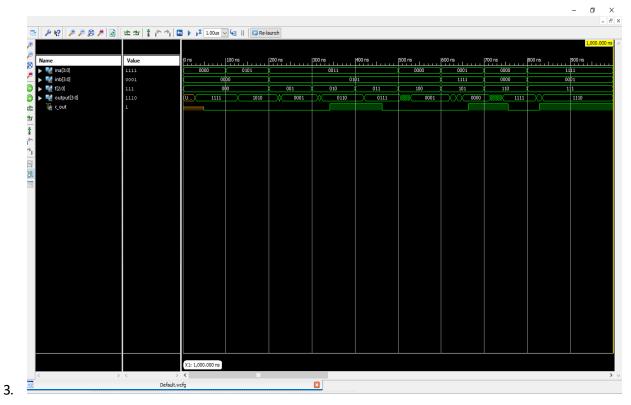


#### Four bit arithmetic unit



1. 4-bit ALU (top-level device) (code provided)

2.



2. 4-bit Shifter (top-level device) (code provided)

