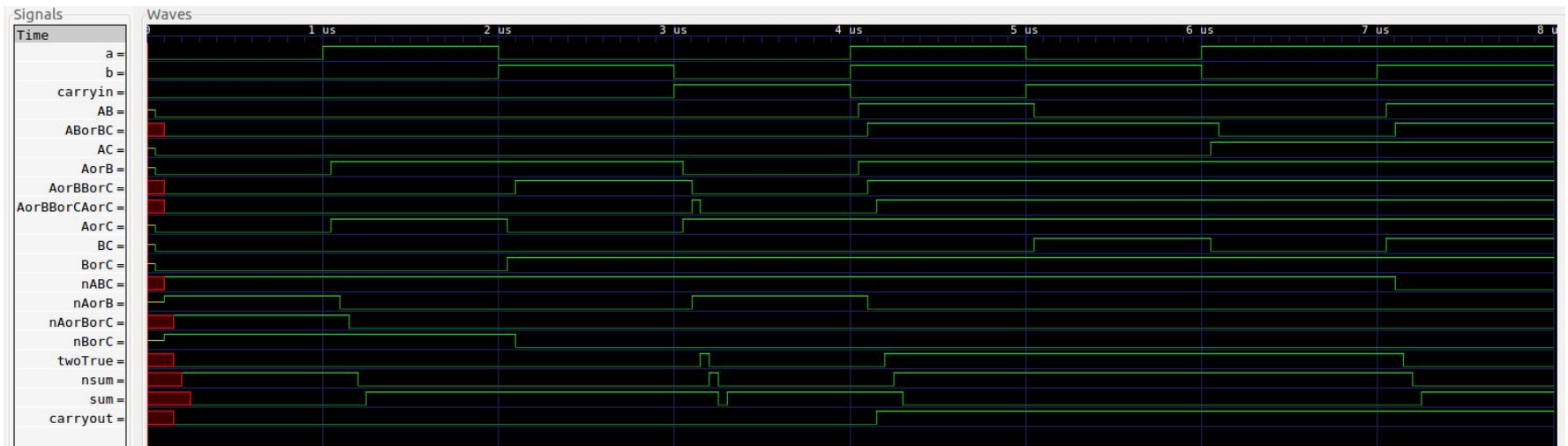


HW 2 Writeup  
Serena Chen

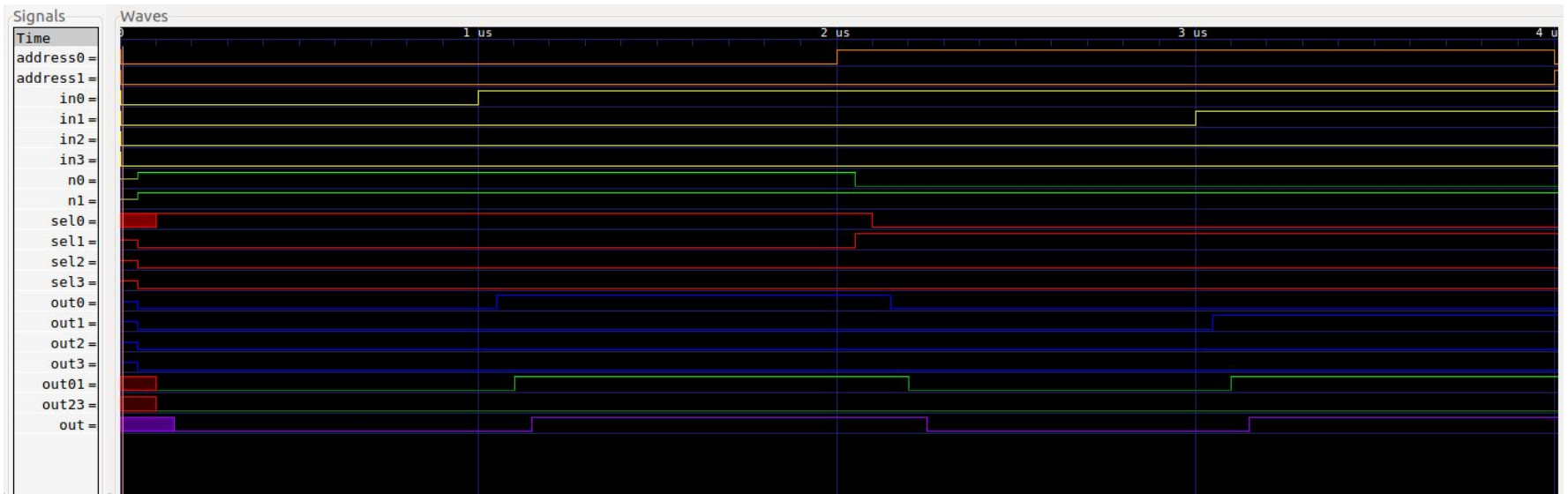
Results from test bench:

```
comparch@comparch-VirtualBox:~/CompArch/HW2$ ./adder.t.o
VCD info: dumpfile adder.vcd opened for output.
IA IB Ci | Su Co | Expected Output
0 0 0 | 0 0 | 0 0
1 0 0 | 1 0 | 1 0
0 1 0 | 1 0 | 1 0
0 0 1 | 1 0 | 1 0
1 1 0 | 0 1 | 0 1
0 1 1 | 0 1 | 0 1
1 0 1 | 0 1 | 0 1
1 1 1 | 1 1 | 1 1
comparch@comparch-VirtualBox:~/CompArch/HW2$ ./multiplexer.t.o
VCD info: dumpfile multiplexer.vcd opened for output.
A0 A1 | I0 I1 I2 I3 | Ou | Expected Output
0 0 | 0 0 0 0 | 0 | false
0 0 | 1 0 0 0 | 1 | true
1 0 | 1 0 0 0 | 0 | false
1 0 | 1 1 0 0 | 1 | true
0 1 | 1 1 0 0 | 0 | false
0 1 | 1 1 1 0 | 1 | true
1 1 | 1 1 1 0 | 0 | false
1 1 | 1 1 1 1 | 1 | true
comparch@comparch-VirtualBox:~/CompArch/HW2$ ./decoder.t.o
VCD info: dumpfile decoder.vcd opened for output.
En A0 A1 | 00 01 02 03 | Expected Output
0 0 0 | 0 0 0 0 | All false
0 1 0 | 0 0 0 0 | All false
0 0 1 | 0 0 0 0 | All false
0 1 1 | 0 0 0 0 | All false
1 0 0 | 1 0 0 0 | 00 Only
1 1 0 | 0 1 0 0 | 01 Only
1 0 1 | 0 0 1 0 | 02 Only
1 1 1 | 0 0 0 1 | 03 Only
comparch@comparch-VirtualBox:~/CompArch/HW2$
```

Adder waveform:



Multiplexer waveform:



Decoder waveform:

