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ECEN 714 Lab 1

1. Full adder simout, symbol, and schematic

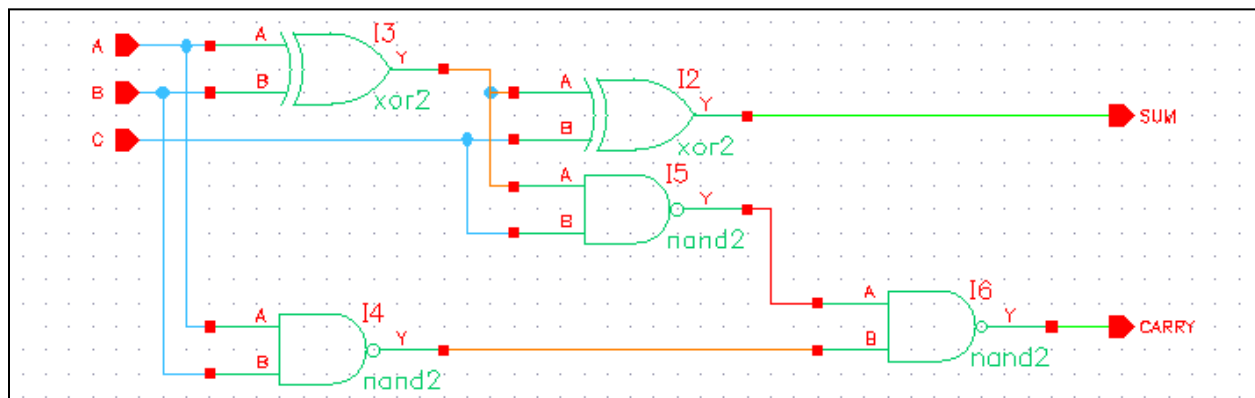
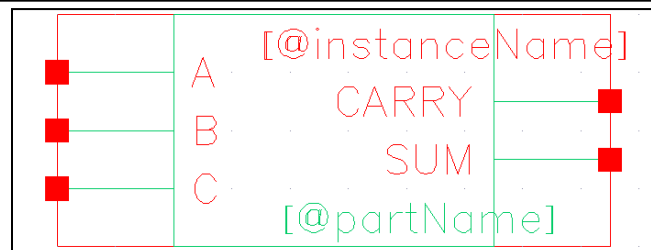
```
TOOL:      ncxlmode      15.20-s086: Started on Sep 08, 2022 at 16:08:52 CDT
ncxlmode
+delay_mode_path
+typdelays
-l
simout.tmp
/home/grads/a/acoskuner500/ecen714/fulladder_run1/testfixture.template
-f /home/grads/a/acoskuner500/ecen714/fulladder_run1/verilog.inpfiles
/opt/coe/ncsu/ncsu-cdk-1.6.0.beta/lib/NCSU_Digital_Parts/nand2/functional/verilog.v
/opt/coe/ncsu/ncsu-cdk-1.6.0.beta/lib/NCSU_Digital_Parts/xor2/functional/verilog.v
ihnl/cds0/netlist
+nostdout
+nocopyright
+ncvlogargs+" -neverwarn -nostdout -nocopyright "
+ncelabargs+" -neg_tchk -nonotifier -sdf_NOcheck_celltype -access +r -pulse_e 100
-pulse_r 100 -neverwarn -timescale 1ns/1ns -nostdout -nocopyright"
+ncsimargs+" -neverwarn -nocopyright -gui -input
/home/grads/a/acoskuner500/ecen714/fulladder_run1/.simTmpNCCmd "
+mpsession+virtuoso9914
+mpshost+zach-127-24.engr.tamu.edu
```

Relinquished control to SimVision...

```
ncsim>
ncsim> source /opt/coe/cadence/INCISIVE152/tools/inca/files/ncsimrc
ncsim> database -open shmWave -shm -default -into shm.db
Created default SHM database shmWave
ncsim> probe -create -shm test -all -depth 1
Created probe 1
ncsim> run

          0 A=0, B=0, C=0, SUM=0, CARRY=0
        50 A=0, B=0, C=1, SUM=1, CARRY=0
       100 A=0, B=1, C=0, SUM=1, CARRY=0
       150 A=0, B=1, C=1, SUM=0, CARRY=1
       200 A=1, B=0, C=0, SUM=1, CARRY=0
       250 A=1, B=0, C=1, SUM=0, CARRY=1
       300 A=1, B=1, C=0, SUM=0, CARRY=1
       350 A=1, B=1, C=1, SUM=1, CARRY=1

ncsim>
```

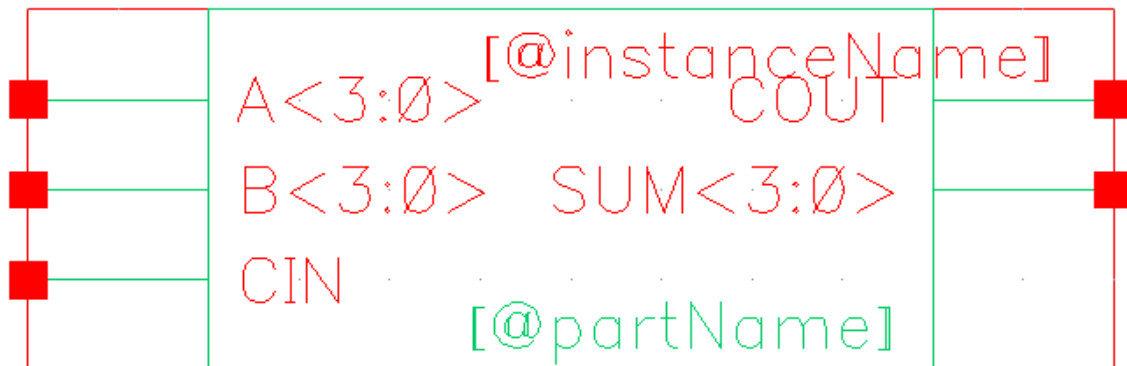


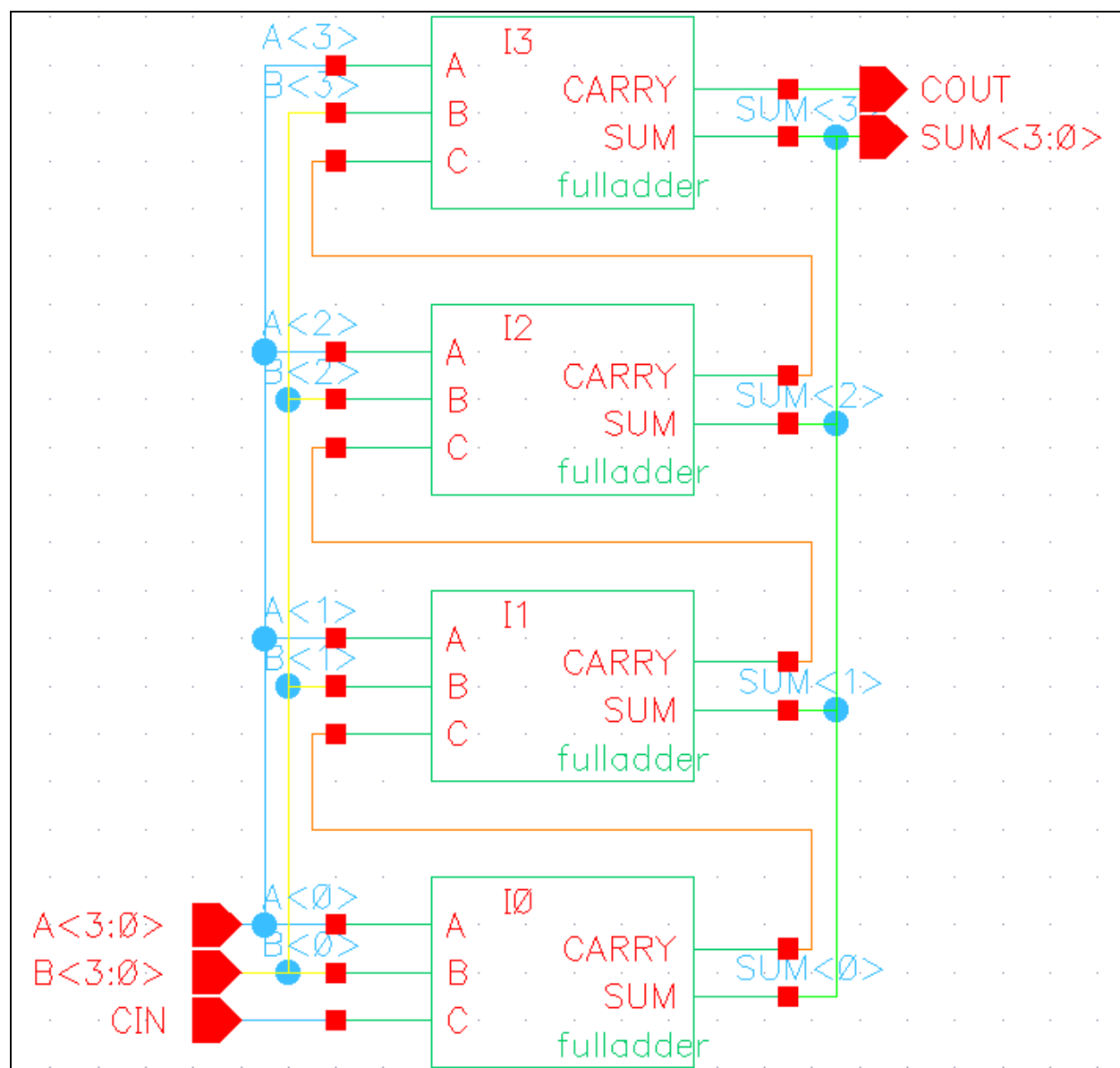
2. 4-bit Adder simout, symbol, and schematic

```
TOOL:      ncxlmode      15.20-s086: Started on Sep 08, 2022 at 17:12:44 CDT
ncxlmode
+delay_mode_path
+typdelays
-l
simout.tmp
/home/grads/a/acoskuner500/ecen714/fouradder_run1/testfixture.template
-f /home/grads/a/acoskuner500/ecen714/fouradder_run1/verilog.inpfiles
/opt/coe/ncsu/ncsu-cdk-1.6.0.beta/lib/NCSU_Digital_Parts/nand2/functional/verilog.v
/opt/coe/ncsu/ncsu-cdk-1.6.0.beta/lib/NCSU_Digital_Parts/xor2/functional/verilog.v
ihnl/cds0/netlist
ihnl/cds1/netlist
+nostdout
+nocopyright
+ncvlogargs+" -neverwarn -nostdout -nocopyright "
+ncelabargs+" -neg_tchk -nonotifier -sdf_NOcheck_celltype -access +r -pulse_e 100
-pulse_r 100 -neverwarn -timescale 1ns/1ns -nostdout -nocopyright"
+ncsimargs+" -neverwarn -nocopyright -gui -input
/home/grads/a/acoskuner500/ecen714/fouradder_run1/.simTmpNCCmd "
+mpsession+virtuoso9914
+mpshost+zach-127-24.engr.tamu.edu

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Relinquished control to SimVision...
ncsim>
ncsim> source /opt/coe/cadence/INCISIVE152/tools/inca/files/ncsimrc
ncsim> database -open shmWave -shm -default -into shm.db
Created default SHM database shmWave
ncsim> probe -create -shm test -all -depth 1
Created probe 1
ncsim> run

          0 A=0000, B=0000, CIN=0, SUM=0000, COUT=0
        50 A=1111, B=1111, CIN=0, SUM=1110, COUT=1
        100 A=1010, B=1010, CIN=1, SUM=0101, COUT=1
        150 A=0101, B=0101, CIN=1, SUM=1011, COUT=0
ncsim>
```





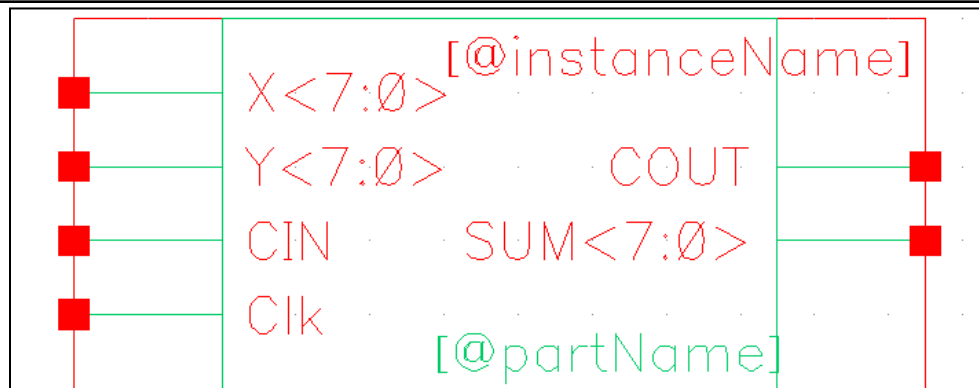
3. 8-bit adder simout, symbol, and schematic

```
TOOL:      ncxlmode      15.20-s086: Started on Sep 08, 2022 at 19:45:29 CDT
ncxlmode
+delay_mode_path
+typdelays
-1
simout.tmp
/home/grads/a/acoskuner500/ecen714/eightadder_run1/testfixture.template
-f /home/grads/a/acoskuner500/ecen714/eightadder_run1/verilog.inpfiles
/opt/coe/ncsu/ncsu-cdk-1.6.0.beta/lib/NCSU_Digital_Parts/inv/functional/verilog.v
/opt/coe/ncsu/ncsu-cdk-1.6.0.beta/lib/NCSU_Digital_Parts/nand2/functional/verilog.v
/opt/coe/ncsu/ncsu-cdk-1.6.0.beta/lib/NCSU_Digital_Parts/xor2/functional/verilog.v
/opt/coe/ncsu/ncsu-cdk-1.6.0.beta/lib/NCSU_Digital_Parts/Dlatch/behavioral/verilog.v
ihnl/cds0/netlist
ihnl/cds1/netlist
ihnl/cds2/netlist
ihnl/cds3/netlist
ihnl/cds4/netlist
+nostdout
+nocopyright
+ncvlogargs+" -neverwarn -nostdout -nocopyright "
+ncelabargs+" -neg_tchk -nonotifier -sdf NOCheck_celltype -access +r -pulse_e 100
-pulse_r 100 -neverwarn -timescale 1ns/1ns -nostdout -nocopyright"
+ncsimargs+" -neverwarn -nocopyright -gui -input
/home/grads/a/acoskuner500/ecen714/eightadder_run1/.simTmpNCCmd "
+mpssession+virtuoso9914
+mpshost+zach-127-24.engr.tamu.edu
```

Relinquished control to SimVision...

```
ncsim>
ncsim> source /opt/coe/cadence/INCISIVE152/tools/inca/files/ncsimrc
ncsim> database -open shmWave -shm -default -into shm.db
Created default SHM database shmWave
ncsim> probe -create -shm test -all -depth 1
Created probe 1
ncsim> run 500ns
      0 X=00000000, Y=00000000, CIN=0, SUM=xxxxxxx, COUT=x
      5 X=00000000, Y=00000000, CIN=0, SUM=00000000, COUT=0
     50 X=01111110, Y=11100111, CIN=0, SUM=00000000, COUT=0
     55 X=01111110, Y=11100111, CIN=0, SUM=01100101, COUT=1
    100 X=11111111, Y=00000000, CIN=1, SUM=01100101, COUT=1
    105 X=11111111, Y=00000000, CIN=1, SUM=00000000, COUT=1
    150 X=10101010, Y=01010101, CIN=0, SUM=00000000, COUT=1
    155 X=10101010, Y=01010101, CIN=0, SUM=11111111, COUT=0
    200 X=10101010, Y=01010101, CIN=1, SUM=11111111, COUT=0
    205 X=10101010, Y=01010101, CIN=1, SUM=00000000, COUT=1
    250 X=11001100, Y=00110011, CIN=0, SUM=00000000, COUT=1
    255 X=11001100, Y=00110011, CIN=0, SUM=11111111, COUT=0
    300 X=11001100, Y=00110011, CIN=1, SUM=11111111, COUT=0
    305 X=11001100, Y=00110011, CIN=1, SUM=00000000, COUT=1
```

```
Ran until 500 NS + 0
ncsim>
```



(Rotated for better viewing)

