Adder

```
# A B Cin | Cout S | Cout S Expected
# 0 0  0  |  0   0 |  0    0
# 0 0  1  |  0   1 |  0    1
# 0 1  0  |  0   1 |  0    1
# 0 1  1  |  1   0 |  1    0
# 1 0  0  |  0   1 |  0    1
# 1 0  1  |  1   0 |  1    0
# 1 1  0  |  1   0 |  1    0
# 1 1  1  |  1   1 |  1    1
```
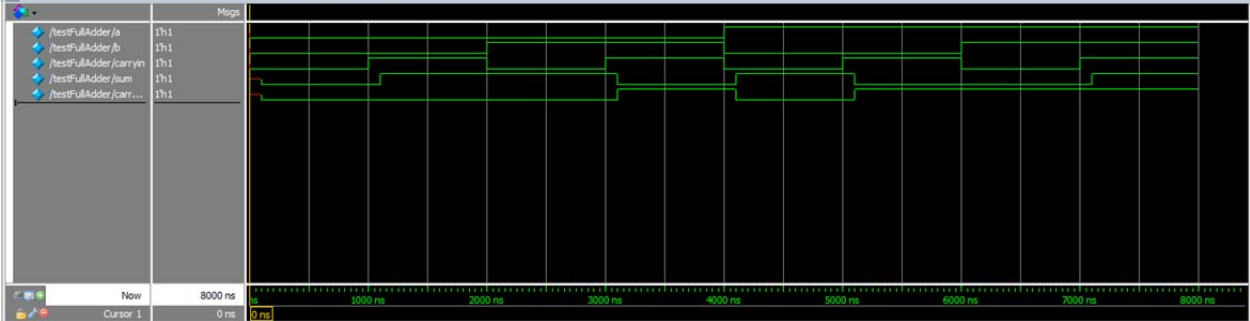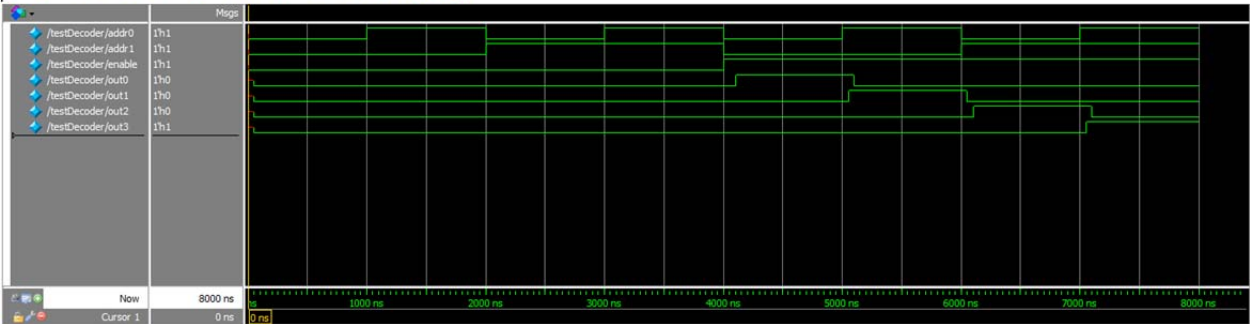

Decoder

```
# En A0 A1| O0 O1 O2 O3 | 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 | O0 Only
# 1  1  0 |  0  1  0  0 | O1 Only
# 1  0  1 |  0  0  1  0 | O2 Only
# 1  1  1 |  0  0  0  1 | O3 Only
```

MUX

```
# A0 A1 | I0 I1 I2 I3 | OUT | Expected Output
# 0  0  | 0  0  0  0 |  0  | 0
# 0  0  | 1  0  0  0 |  1  | 1
# 1  0  | 0  0  0  0 |  0  | 0
# 1  0  | 0  1  0  0 |  1  | 1
# 0  1  | 0  0  0  0 |  0  | 0
# 0  1  | 0  0  1  0 |  1  | 1
# 1  1  | 0  0  0  0 |  0  | 0
# 1  1  | 0  0  0  1 |  1  | 1
```