

# EE577B Lab2 Report

Huayu Fu

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## Part 1:

1. Simulation time 680NS

```
ncsim> simvision -input ./scripts/simvision.sv
ncsim> run
Simulation stopped via $stop(1) at time 680 NS + 0
ncsim>
```

2. Simulation output result

1	ff	ff	ee	ee	ee	ee	ee	ff
2	ff	ff	00	00	00	ee	ee	ff
3	ff	ff	ee	ee	00	00	ee	ff
4	ff	ff	ff	ff	ff	00	ee	ee
5	ff	ff	ff	ff	ff	00	ee	ee
6	ff	ff	ee	ee	ee	00	ee	ee
7	ff	ff	ff	00	00	00	ee	ee
8	ff	ff	ff	ee	ee	ee	ee	ff

3. Last plunge

2	0	0	1	0	1	0	0	0
3	0	0	0	0	0	1	0	0
4	0	0	0	0	0	1	0	0
5	0	0	0	0	0	1	0	0
6	0	0	0	0	0	1	0	0
7	0	0	0	0	0	1	0	0
8	0	0	0	0	1	1	0	0
9	0	0	0	0	0	1	0	0

4. Last label

00	07	12	23	12	00	00	00
00	07	25	23	13	13	00	00
00	07	21	23	21	13	08	00
00	00	07	07	07	21	00	00
00	00	00	00	00	21	00	00
00	00	00	00	00	21	00	00
00	00	00	06	24	21	08	00
00	00	00	00	00	11	00	00

## Part 2

### 4. critical path

Point	Incr	Path
-----		
clock clk (rise edge)	0.00	0.00
clock network delay (ideal)	0.00	0.00
input external delay	1.00	1.00 r
X (in)	0.00	1.00 r
U20/Y (INVSX1)	0.02	1.02 f
U10/Y (AOI22X1)	0.03	1.05 r
U17/Y (BUFX2)	0.04	1.08 r
U9/Y (OAI21X1)	0.01	1.09 f
Y[1] (out)	0.00	1.09 f
data arrival time		1.09

clock clk (rise edge)	5.00	5.00
clock network delay (ideal)	0.00	5.00
output external delay	-1.00	4.00
data required time		4.00

Slack : 2.91

### 5. 34 timing path

### 6. Area constant minimal clock is 2.1

