

VLSI DESIGN AND AUTOMATION SUMMER INTERNSHIP
WEEK 5 SUBMISSION

RESOURCE HERE : [WEEK 5](#) (ENC and NETLIST files are here)

BEFORE FILE TEXT :

tempus 5> report_timing -late

```
#####
#####
```

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Generated by: Cadence Tempus 10.20-p001_1

OS: Linux x86_64(Host IP wsidaug9.jiit.ac.in)

Generated on: Mon Jul 14 13:51:23 2025

Design: vending_machine

Command: report_timing -late

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#####
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Path 1: M1 Setup Check with Pin out_reg/CK

Endpoint: out_reg/SE (v) checked with leading edge of 'clk'

Begin point: in[0] (v) triggered by leading edge of 'clk'

Path Groups: {clk}

Analysis View: WORST

Other End Arrival Time 0.000

- Setup 0.230

+ Phase Shift 10.000

- Uncertainty 0.200

= Required Time	9.570
- Arrival Time	0.448
= Slack Time	9.123
Clock Rise Edge	0.000
+ Input Delay	0.300
= Beginpoint Arrival Time	0.300

Instance	Arc	Cell	Delay	Arrival Time	Required Time
				Time	Time
g411 A v -> Y ^ INVX1 0.023 0.324 9.446					
g409 A0 ^ -> Y v OAII21XL 0.124 0.448 9.570					
out_reg SE v SDFFFTRX1 0.000 0.448 9.570					

tempus 4> tempus 4> report_timing -early

#####

#####

Generated by: Cadence Tempus 20.20-p001_1

OS: Linux x86_64(Host ID vlsidaug9.jiit.ac.in)

```

# Generated on: Mon Jul 14 13:49:51 2025
# Design: vending_machine
# Command: report_timing -early
#####
#####
```

Path 1: VIOLATED Hold Check with Pin present_state_reg/CK

Endpoint: present_state_reg/D (v) checked with leading edge of 'clk'

Beginpoint: next_state_reg/Q (v) triggered by leading edge of 'clk'

Path Groups: {clk}

Analysis View: BEST

Other End Arrival Time	0.000
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+ Hold	0.031
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+ Phase Shift	0.000
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+ Uncertainty	0.200
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= Required Time	0.231
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Arrival Time	0.116
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Slack Time	-0.116
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Clock Rise Edge	0.000
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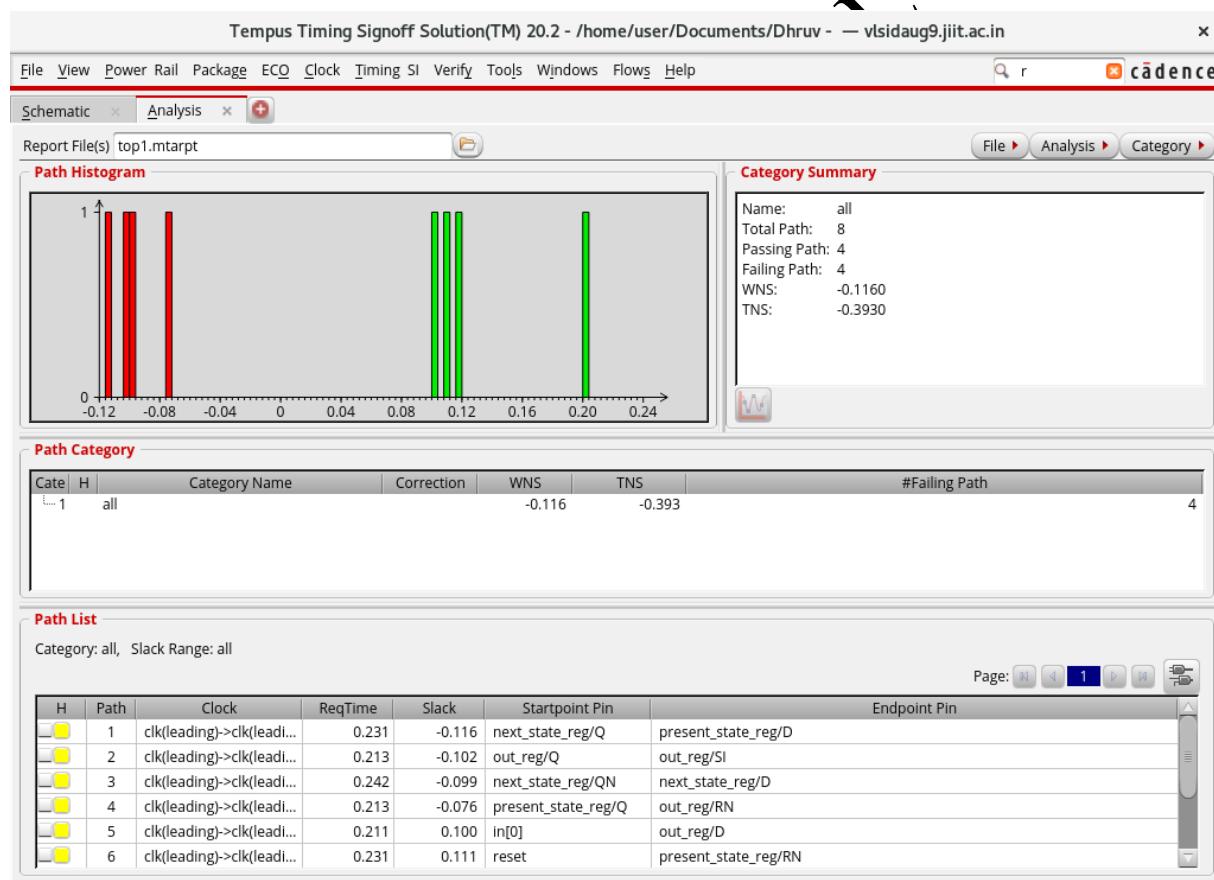
+ Clock Network Latency (Ideal)	0.000
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= Beginpoint Arrival Time	0.000
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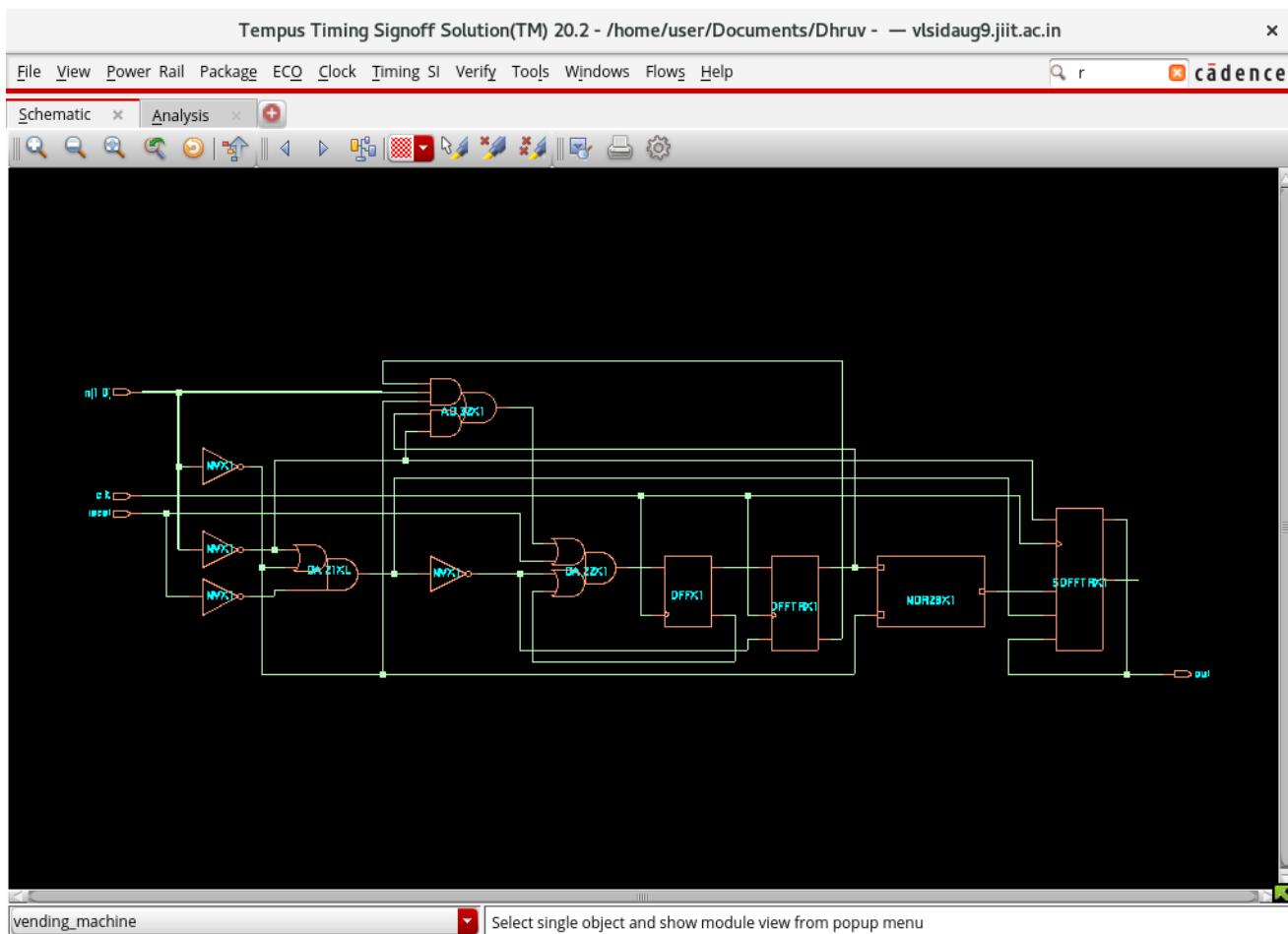
Instance	Arc	Cell	Delay	Arrival	Required
				Time	Time

-----+-----+-----+-----+-----+-----+
next_state_reg CK ^ 0.000 0.116
next_state_reg CK ^ -> Q v DFFX1 0.116 0.116 0.231
present_state_reg D v DFFTRX1 0.000 0.116 0.231
+-----+

SCREENSHOTS :



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PRIYANSHU ACHARYA