



## DAY-30

### #100DAYSRTL

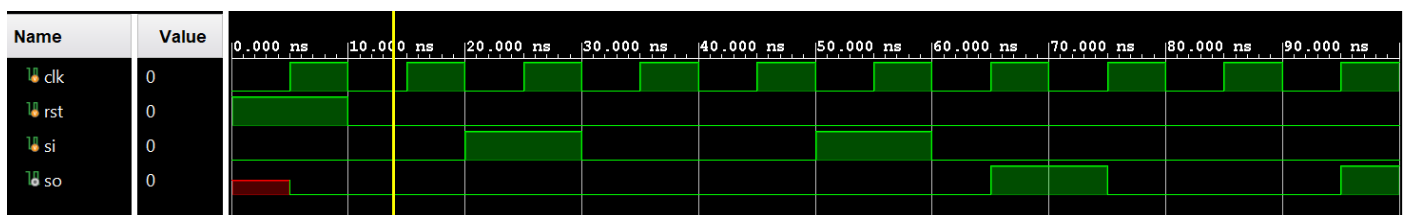
**“Aim”:-**To Design Serial Input and Serial output & Serial input and Parallel output

**“SISO”**

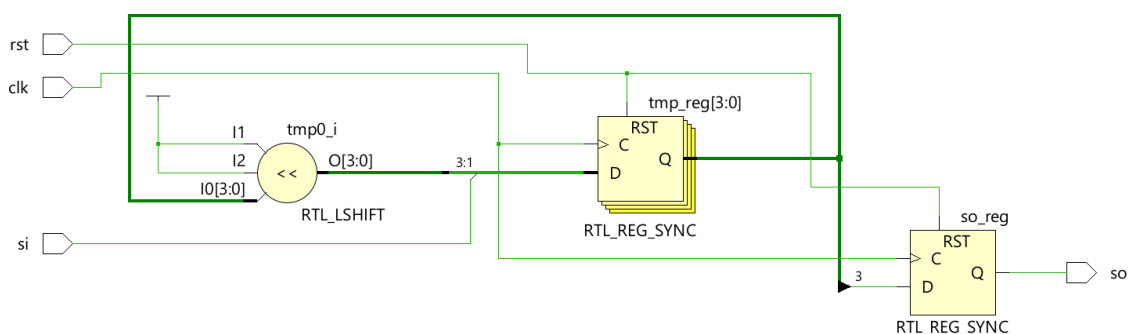
**“Design Code”:-**

```
module sisomod(clk,rst,si,so);
input clk,si,rst;
output reg so;
reg [3:0] tmp;
always @(posedge clk )
begin
if (rst) begin
tmp <= 4'b0000;
so<=0;
end
else begin
tmp <= tmp << 1;
tmp[0] <= si;
so <= tmp[3];
end
end
endmodule
```

**“Waveforms”:-**



**“Schematics”:-**



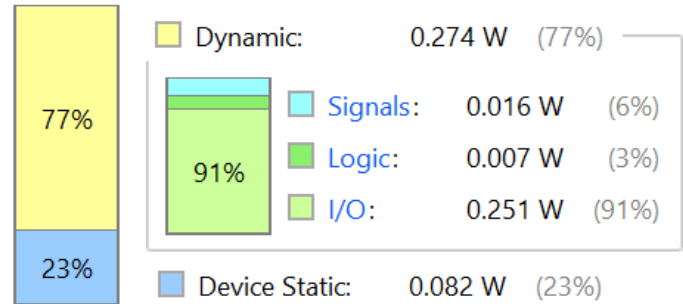
## Summary

Power estimation from Synthesized netlist. Activity derived from constraints files, simulation files or vectorless analysis. Note: these early estimates can change after implementation.

<b>Total On-Chip Power:</b>	<b>0.356 W</b>
<b>Design Power Budget:</b>	<b>Not Specified</b>
<b>Power Budget Margin:</b>	<b>N/A</b>
<b>Junction Temperature:</b>	<b>25.7°C</b>
Thermal Margin:	59.3°C (31.3 W)
Effective $\theta_{JA}$ :	1.9°C/W
Power supplied to off-chip devices:	0 W
Confidence level:	Low

[Launch Power Constraint Advisor](#) to find and fix invalid switching activity

### On-Chip Power

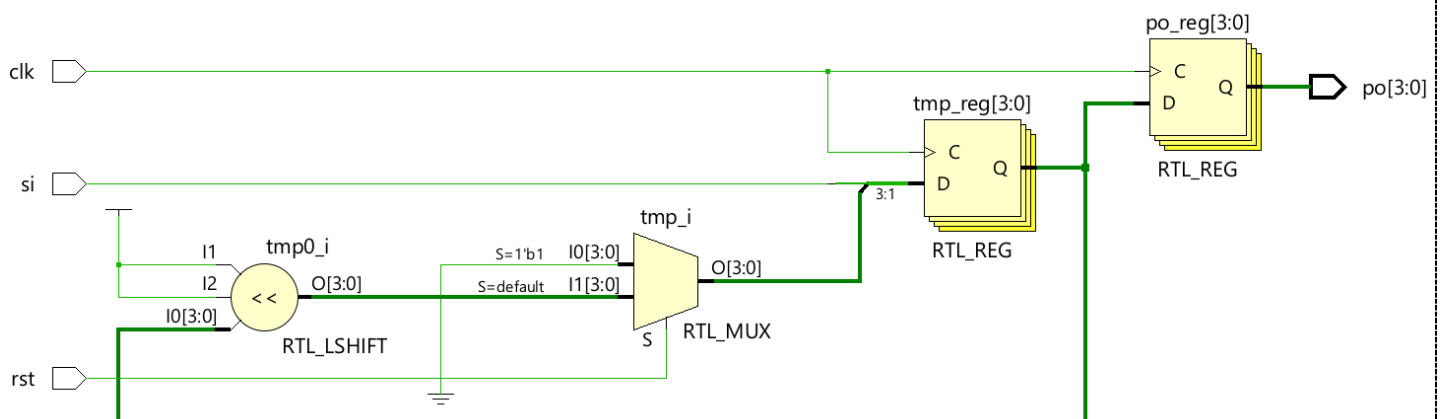


## “SIPO”

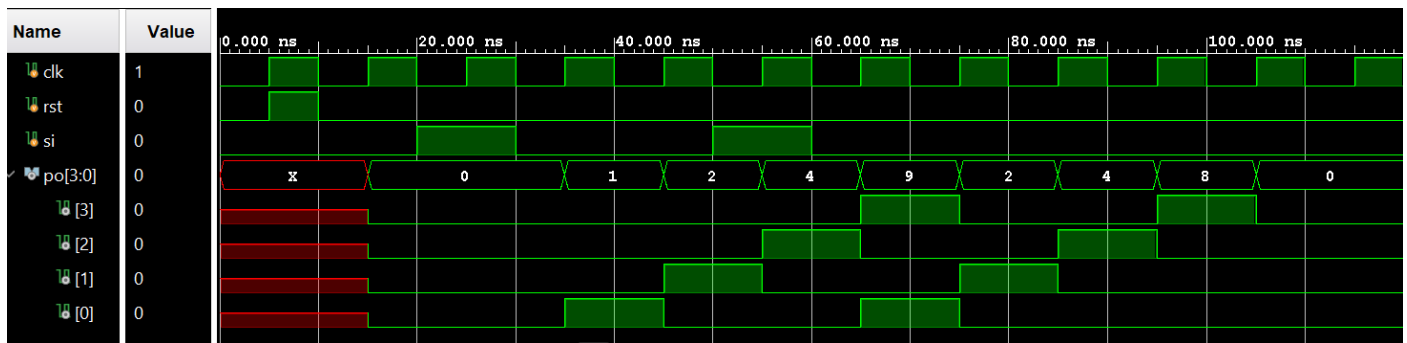
### “Design Code”:-

```
module sipomod(clk,rst, si, po);  
  input clk, si,rst;  
  output reg [3:0] po;  
  reg [3:0] tmp;  
  always @(posedge clk) begin  
    if (rst)  
      tmp <= 4'b0000;  
    else  
      tmp <= tmp << 1;  
      tmp[0] <= si;  
      po = tmp;  
    end  
  endmodule
```

### “Schematics”:-



# “Waveforms”:-



## Summary

Power estimation from Synthesized netlist. Activity derived from constraints files, simulation files or vectorless analysis. Note: these early estimates can change after implementation.

**Total On-Chip Power:** 0.875 W  
**Design Power Budget:** Not Specified  
**Power Budget Margin:** N/A  
**Junction Temperature:** 26.6°C  
Thermal Margin: 58.4°C (30.8 W)  
Effective  $\theta_{JA}$ : 1.9°C/W  
Power supplied to off-chip devices: 0 W  
Confidence level: Low

[Launch Power Constraint Advisor](#) to find and fix invalid switching activity

## On-Chip Power

