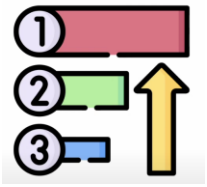
DAY-49

#100DAYSRTL

“Aim”:- To design a Strict or Fixed priority arbiter.

“Theory”:-

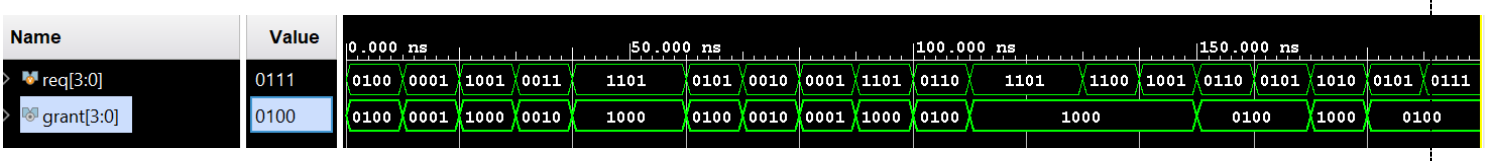


- A fixed priority arbiter selects one of the requesters based on a predefined priority scheme. In a fixed priority arbiter, the highest priority request is granted access first. If multiple requests have the same priority, the arbiter selects one of the requests in a round-robin fashion.

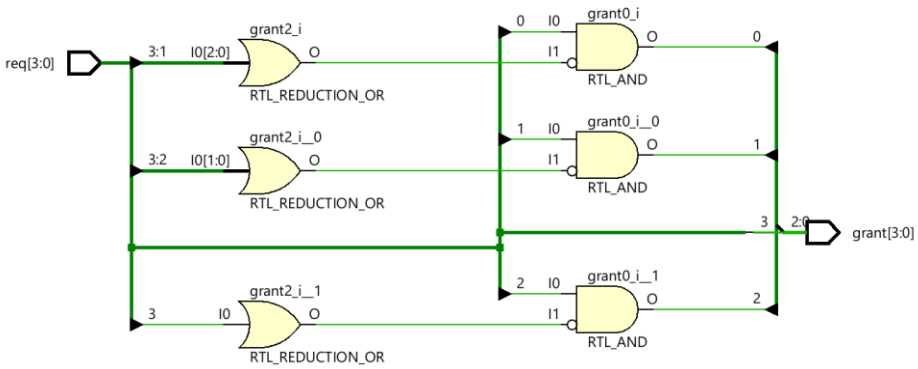
“Design Code”:-

```
module FPA #(parameter NumPorts=4)(req,grant);
  input [NumPorts-1:0] req;
  output [NumPorts-1:0] grant;
assign grant[3]=req[3];
genvar i;
  for(i=2; i>=0; i=i-1) begin
    assign grant[i] = req[i] && (~(|(req[3:i+1])));
  end
endmodule
```

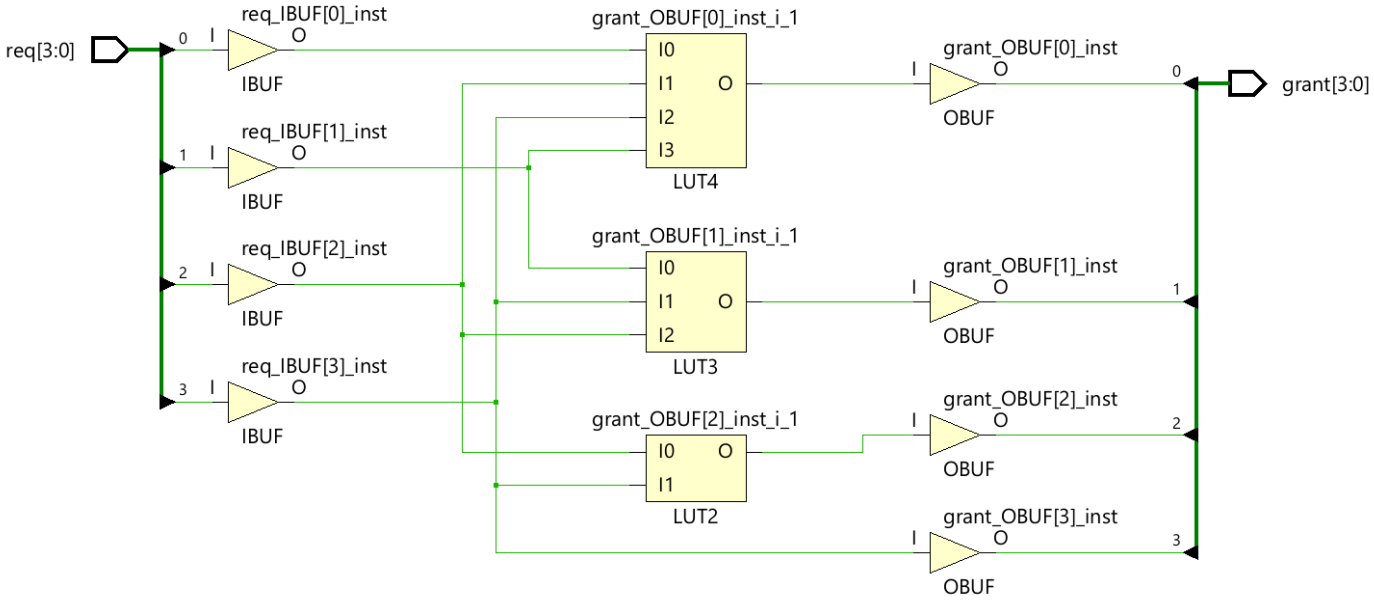
“Waveforms”:-



“Elaborated design”:-



“Implemented design”:-



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:	**0.872 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 ϑJA:	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