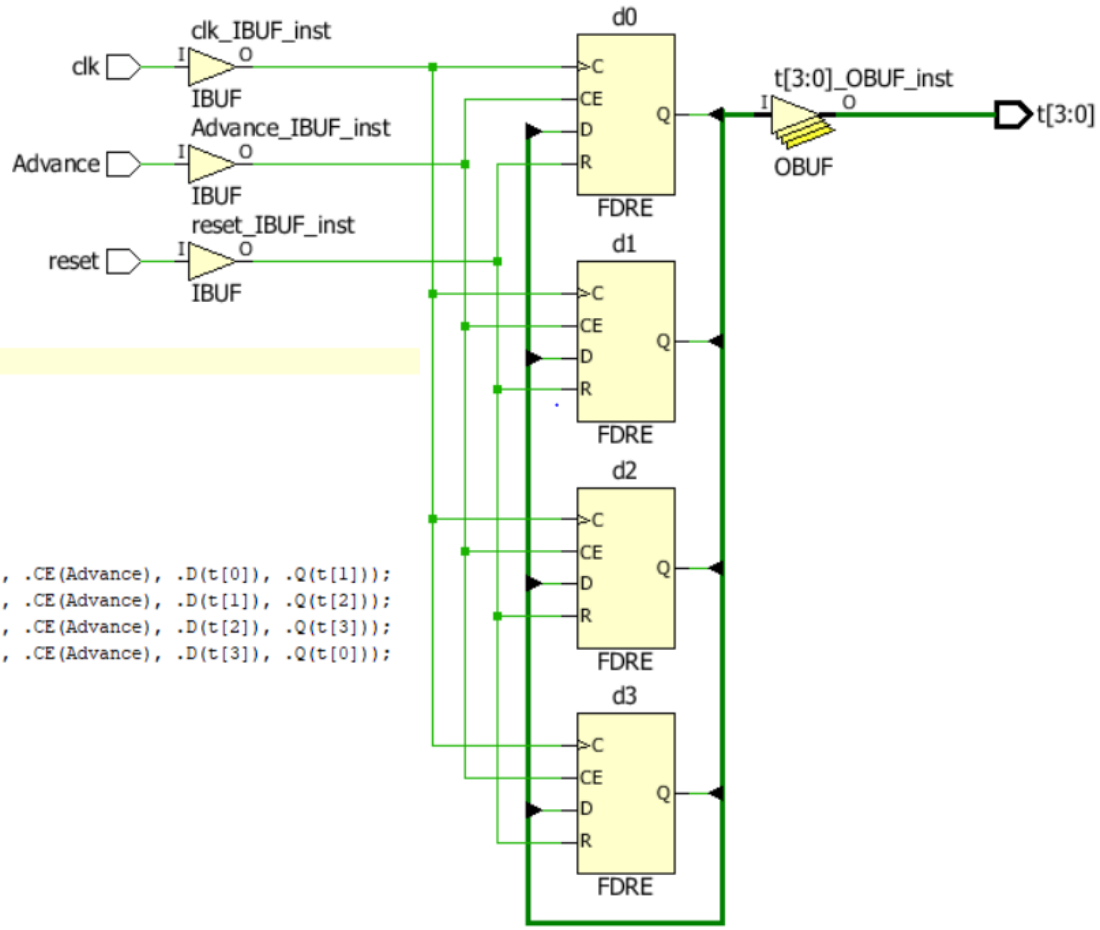
Ring Counter

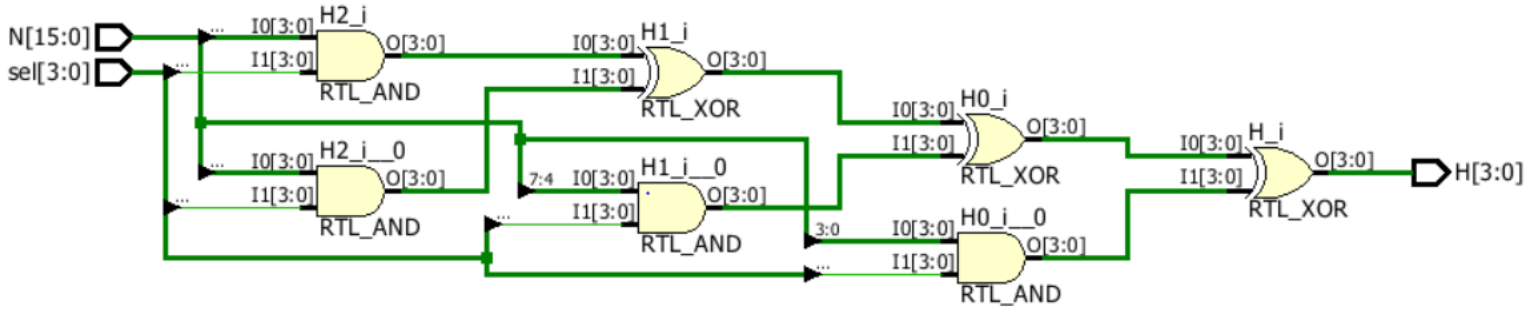



```
module RingCNT(
    input clk,
    input Advance,
    input reset,
    output [3:0]t
    );

    FDRE #(.INIT(1'b1) ) d0(.C(clk), .R(reset), .CE(Advance), .D(t[0]), .Q(t[1]));
    FDRE #(.INIT(1'b0) ) d1(.C(clk), .R(reset), .CE(Advance), .D(t[1]), .Q(t[2]));
    FDRE #(.INIT(1'b0) ) d2(.C(clk), .R(reset), .CE(Advance), .D(t[2]), .Q(t[3]));
    FDRE #(.INIT(1'b0) ) d3(.C(clk), .R(reset), .CE(Advance), .D(t[3]), .Q(t[0]));

endmodule
```

Selector




```
module Selector(
    input [3:0] sel,
    input [15:0] N,
    output [3:0] H
    );
      assign H = ((N[15:12]&{4{sel[3]}}) ^(N[11:8]&{4{sel[2]}})^(N[7:4]&{4{sel[1]}}) ^(N[3:0]&{4{sel[0]}}));
endmodule
```