

```
`timescale 1ns / 1ps
///////////////////////////////
// Company:
// Engineer:
//
// Create Date: 05/04/2022 03:42:37 PM
// Design Name:
// Module Name: shifter16
// Project Name:
// Target Devices:
// Tool Versions:
// Description:
//
// Dependencies:
//
// Revision:
// Revision 0.01 - File Created
// Additional Comments:
//
///////////////////////////////

module shifter16(
    input clk,
    input adv,
    output [15:0] out
);

    wire [15:0] hold;

    assign hold = {out[14:0], 1'b1} & {16{adv}};

    FDRE #(INIT(1'b0)) shift[15:0] (.C({16{clk}}), .CE({16{adv}}), .D(hold), .Q(out)

endmodule
```