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module Top_Module_Main(
    input btnU,
    input btnL,
    input btnR,
    input clkIn,
    output dp,
    output [6:0] seg,
    output [3:0] an,
    output [15:0] led
);
    wire qsec, digsel, clk;
    wire [15:0] bit16out;
    lab6_clks slowit (.clkIn(clkIn), .greset(btnU),
.clk(clk), .digsel(digsel), .qsec(qsec));

    //StateMachine
    wire run_game, add, subtract;
    StateMachine statemachine (.Left(btnL),
.Right(btnR), .clk(clk), .RunGame(run_game), .Add(add),
.Subtract(subtract));

    //TimeCounter
    wire second, start, utc, tick;
    wire [3:0] sec;
    Edge_Detector ed_gamestart (.clk(clk), .btn(btnL |
btnR), .out(start));
    TimeCounter timecount (.clk(clk), .CE(btnL | btnR),
.Qsec(qsec), .Reset(start), .Signal(second));
    Edge_Detector ed_tick (.clk(clk), .btn(second),
.out(tick));
    countUD4L cnt1 (.Up(tick&!utc), .LD(1'b0),

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.Dw(1'b0), .Q(4'b0), .clk(clk), .UTC(utc),
.Reset(start), .Qout(sec[3:0]));
    assign bit16out[15:12] = sec;

//TurkeyCounter
wire negative;
    TurkeyCounter turkeycounter (.Add(add),
.Subtract(subtract), .clk(clk), .Negative(negative),
.Turkeys(bit16out[7:0]));

//logic for LED
assign led[8:0] = 9'b000000000;
assign led[14:10] = 5'b00000;
assign led[9] = !btnR;
assign led[15] = !btnL;

//import
assign bit16out[11:8] = 4'b0000;
wire [3:0]Qring; wire negdisp;
    RingCounter ring_cntr (.digsel(digsel), .clk(clk),
.Q(Qring));

assign an[0] = !Qring[0];
assign an[1] = !Qring[1];
assign an[2] = !(Qring[2] & negative);
assign an[3] = !(Qring[3] & run_game);
assign dp = 1;
wire [3:0]sel;
    Selector select(.sel(Qring), .N(bit16out),
.H(sel));
    hex7seg segment_disp (.n(sel), .seg(seg),

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.Negative(Qring[2])); //Negative is the display we're  
on
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endmodule
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