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`timescale 1ns / 1ps
/**********************************************
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*
* Module: Stopwatch
*
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* Class: ECEN 220, Section 1, Winter 2021
* Date: 3/9/21
*
* Description: Instances the Mod_Counter
module to create a 4-digit stopwatch based
on a 100 Hz counter
*
*
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`default_nettype none


module Stopwatch(
    input wire logic clk, reset, run,
    output logic [3:0] digit0, digit1,
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digit2, digit3);

    logic timer_runover;
    logic [19:0] timer_out;
    logic [3:0] runover;

    //module    Mod_Value, WID      clk,
reset, increment, rolling_over, count (WID)
    Mod_Counter #(1000000, 20) Timer(clk,
reset, run, timer_runover, timer_out);
    Mod_Counter #(10, 4) D0(clk, reset,
timer_runover, runover[0], digit0);
    Mod_Counter #(10, 4) D1(clk, reset,
runover[0], runover[1], digit1);
    Mod_Counter #(10, 4) D2(clk, reset,
runover[1], runover[2], digit2);
    Mod_Counter #(6, 4) D3(clk, reset,
runover[2], runover[3], digit3);



endmodule
```