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EDITOR ✓ NAV-TLV LOG

```
1  \m5_TLV_version 1d: tl-x.org
2  \m5
3
4  // =====
5  // Welcome, new visitors! Try the "Learn" menu.
6  // =====
7
8  //use(m5-1.0)  /// uncomment to use M5 macro library.
9  \SV
10 // Macro providing required top-level module definition, random
11 // stimulus support, and Verilator config.
12 m5_makerchip_module  // (Expanded in Nav-TLV pane.)
13 \TLV
14 // Combinational Calculators for Addition, Subtraction, Multiplication
15 // $reset = *reset;
16 // Stimulus .....
17 |calc
18 @0
19 // Stimulus for Calculator .....
20 $reset = *reset;
21 $op[1:0] = *cyc_cnt[1:0];
22 $reset_zero[31:0] = 32'b0;
23 $val2[31:0] = $rand2[3:0];
24
25 // Stimulus for Free Running Counter.....
26 $inp1[0:0] = 1;
27 $inp2[0:0] = 0;
28 // Summation of next state (feedback) and trigger input "1".....
29 $sum_sq[3:0] = $inp1 + >>1$cnt[3:0];
30 // Arithmetic Functions (Add, Subt, Mult and Div).....
31 |calc
32 @1
33 $Add_out[31:0] = $val1_sq + $val2;
34 $Sub_out[31:0] = $val1_sq - $val2;
35 $Mul_out[31:0] = $val1_sq * $val2;
36 $Div_out[31:0] = $val1_sq / $val2;
37 // Mux (4x1) Operation.....
38 $calc_out[31:0] = ($op == 00 & $reset == 0) ? $Add_out:
39                  ($op == 01 & $reset == 0) ? $Sub_out:
40                  ($op == 10 & $reset == 0) ? $Mul_out:
41                  ($op == 10 & $reset == 0) ? $Div_out:
42                  $reset_zero;
43 $val1_sq[31:0] = & $calc_out;
44
45 // Free Running Counter Mux (2x1) Operation .....
46 $cnt[3:0] = ($reset == 1) ? $inp2:
47             $sum_sq;
48 //
49 //...
50 // Assert these to end simulation (before the cycle limit).
51 *passed = *cyc_cnt > 40;
52 *failed = 1'b0;
53 \SV
54 endmodule
55
```