DAY-32
#100DAYSOFRTL

PROBLEM STATEMENT:--

1. A single-output digital system with four inputs (a,b,c,d) generates a logic-1 when 2, 7, or 15 appears on the inputs, and a logic-0 when 0, 1, 4, 5, 6, 9, 10, 13, or 14 appears. The input conditions for the numbers 3, 8, 11, and 12 never occur in this system. For example, 7 corresponds to a,b,c,d being set to 0,1,1,1, respectively.
   Determine the output out_sop in minimum SOP form, and the output out_pos in minimum POS form

Write your solution here

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```
module top_module (
    input a,
    input b,
    input c,
    input d,
    output out_sop,
    output out_pos
);
assign out_sop = (c&d)|(~a&~b&c);
    assign out_pos = c&(~b|~c|d)&(~a|~c|d);

endmodule
```

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exams/ece241_2013_q2 — Compile and simulate

Running Quartus synthesis. Show Quartus messages...
Running ModelSim simulation. Show Modelsim messages...

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