

A 2-bit input digital to seven segment decoder is to be designed. The circuit will accept binary combinations 00, 01, 10, 11, and drive a seven segment display to show 0, 1, 2, 3, respectively.

1. Construct the truth tables for segment outputs a through g with d1, and d0 as inputs.
2. Design 7 circuits to individually drive the segments.
3. Demonstrate your solution by simulating this circuit using *Digital*. Your circuit is expected to replace the block labeled “bin2seven” in Fig. 1.

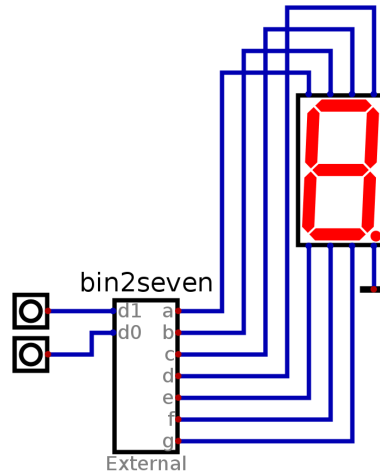


Fig. 1: A digital to seven segment decoder with 2-bit input.

**Submit:**

1. Your truth tables and drawings of designed circuits.
2. Your *Digital* simulation file (with .dig extension).

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