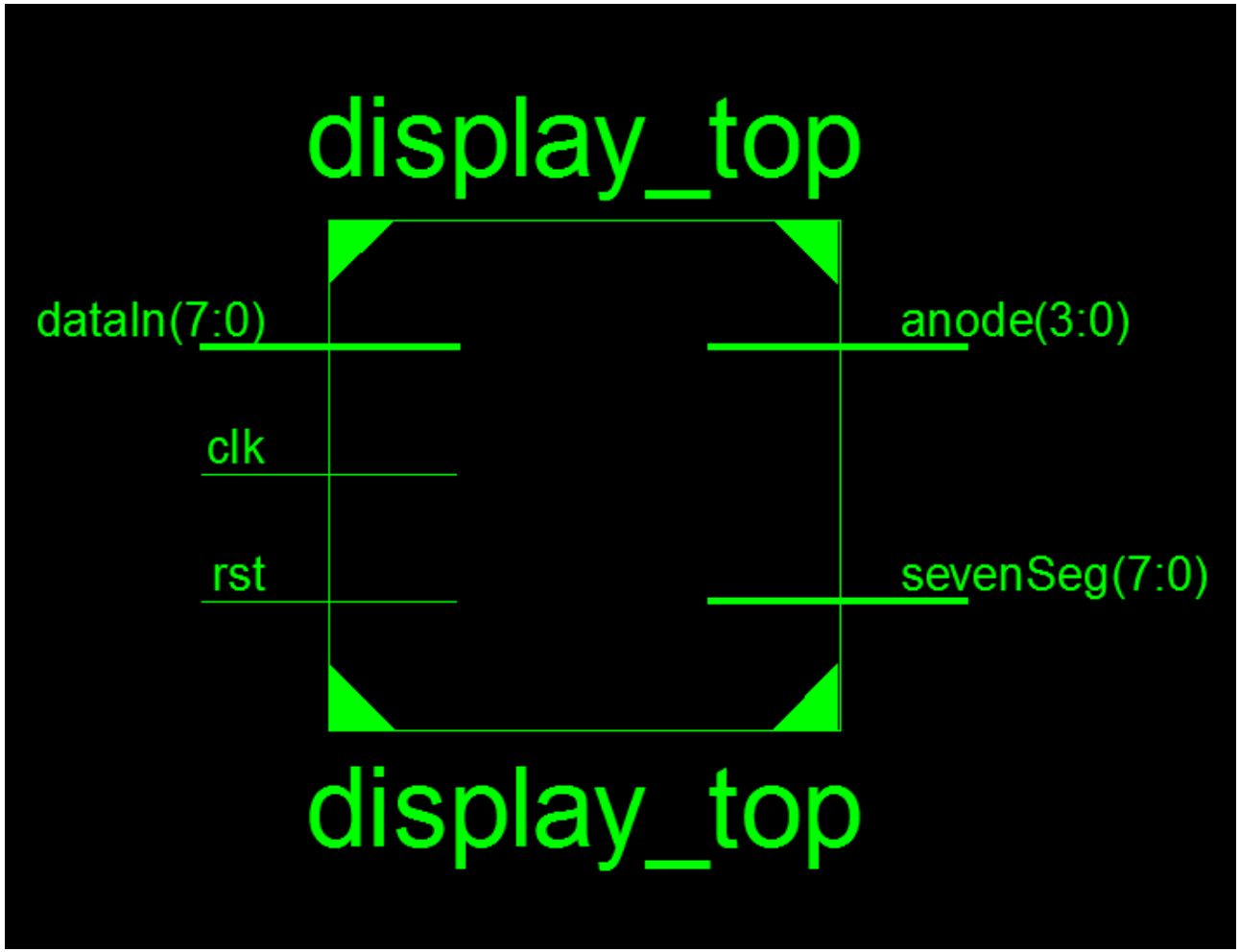
7 Segment Rotating Display

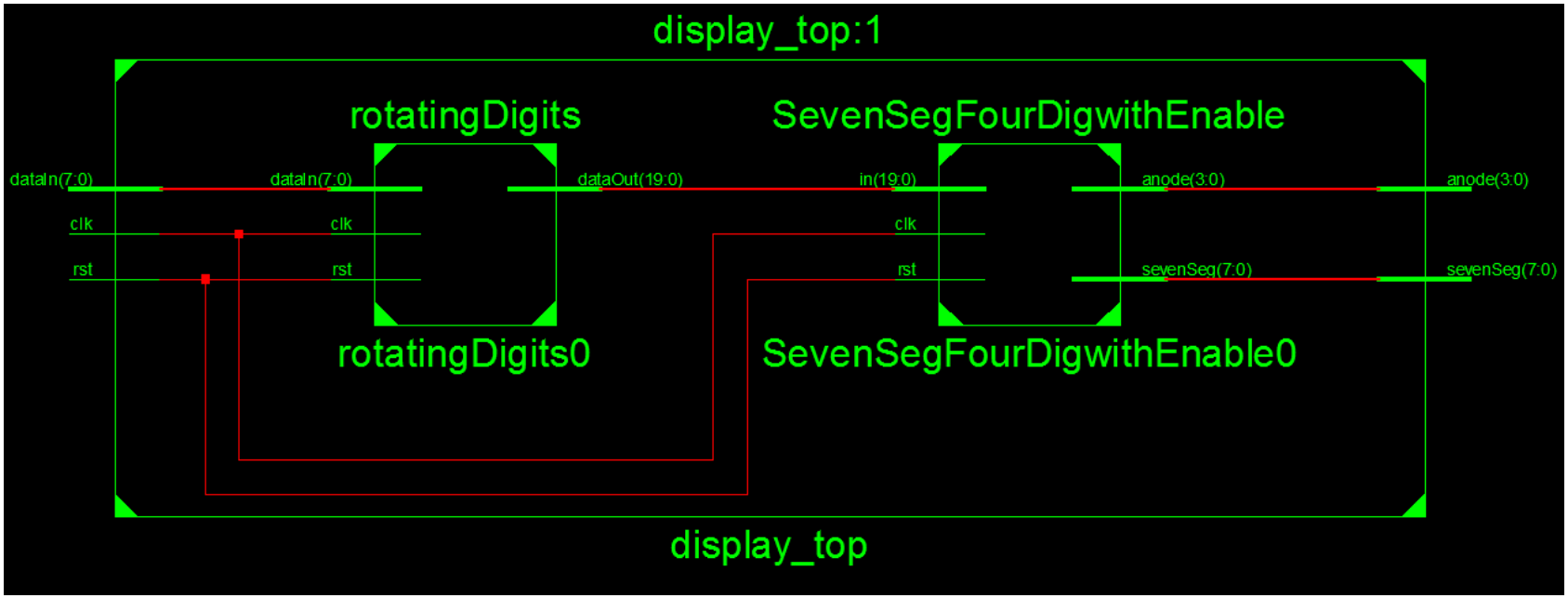
Design Top Level:



Design Top Level:

- Inputs
  - dataIn[7:0] will be tied to the switches (SW7-SW0) on the board.
  - clk will be connected to the clock pin.
  - rst will be connected to the button BTN0 on the board.
- Outputs
  - anode[3:0] will be connected to 7 segment anode pins.
  - sevenSeg[7:0] will be connected to each of the seven segment displays.

Submodule Connections:

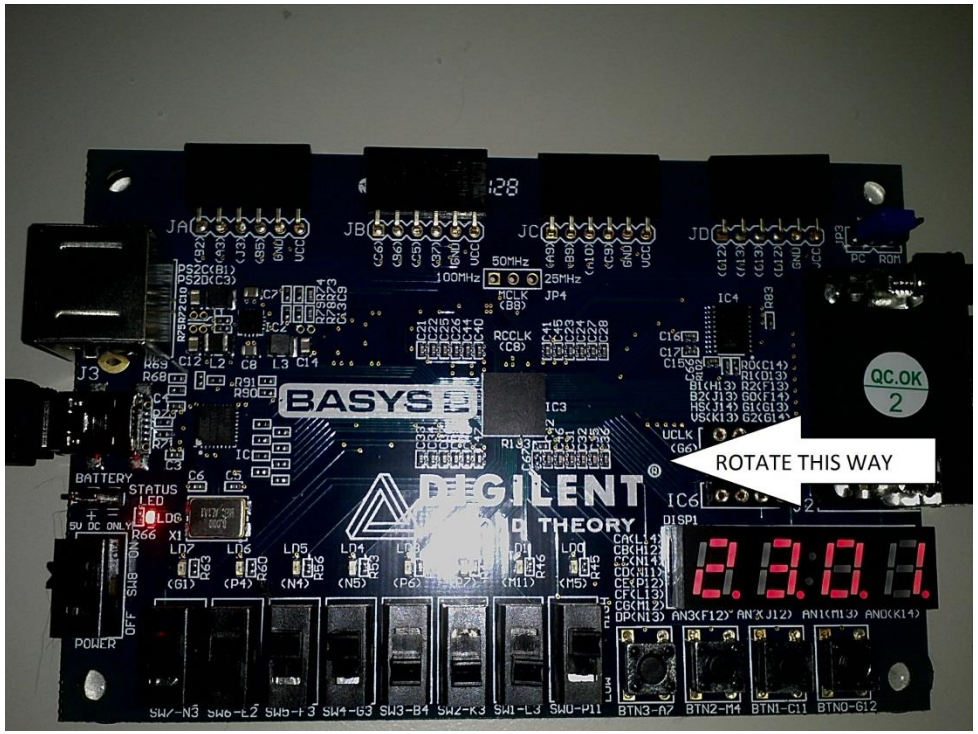


Submodule Connections:

There are two modules inside the topmodule.

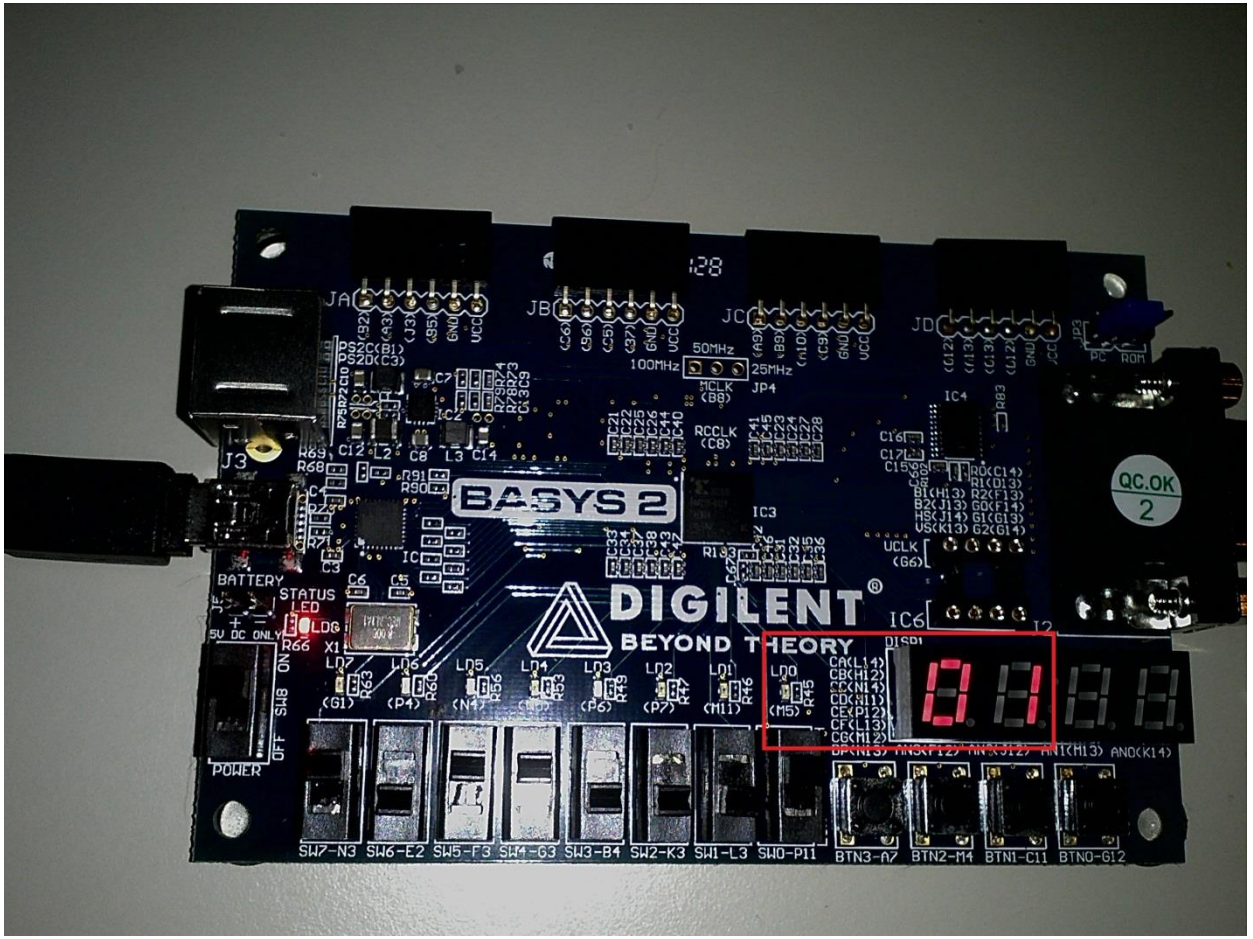
- Interface module takes input number and output the rotated the number with a little delay.
- SevenSegFourDig module takes the output from the interface module and produce anode and sevenSeg outputs for seven segment display.

Design Behavior:

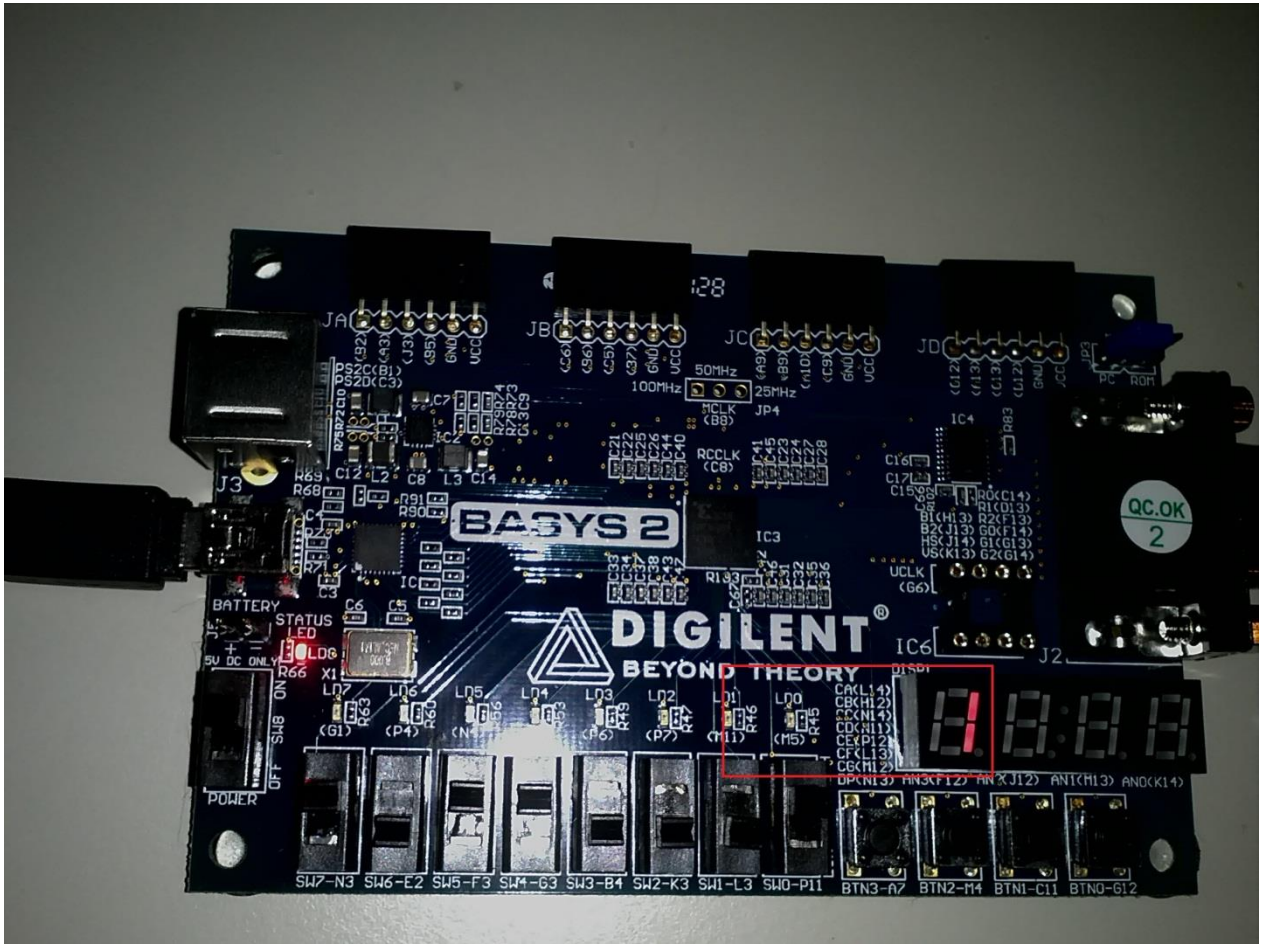


Data is taken from 4 different 2 bit input switches at every reset, then the data taken is rotated from right to left. To see where the number starts and ends, 3 empty digits are attached to the output.

Design Behavior:



Design Behavior:



Design Behavior: