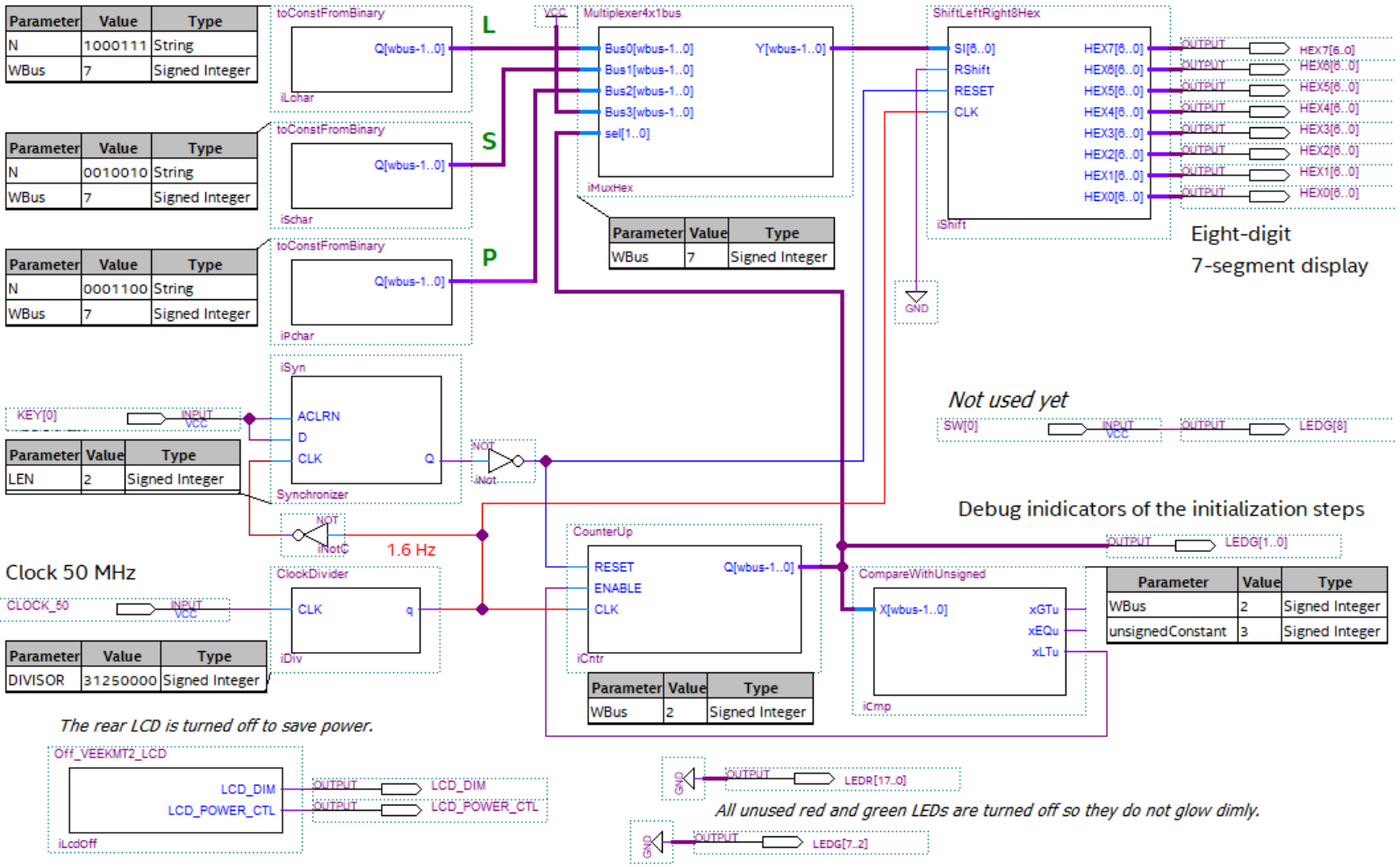
# Task – Advertising Panel - 4 points

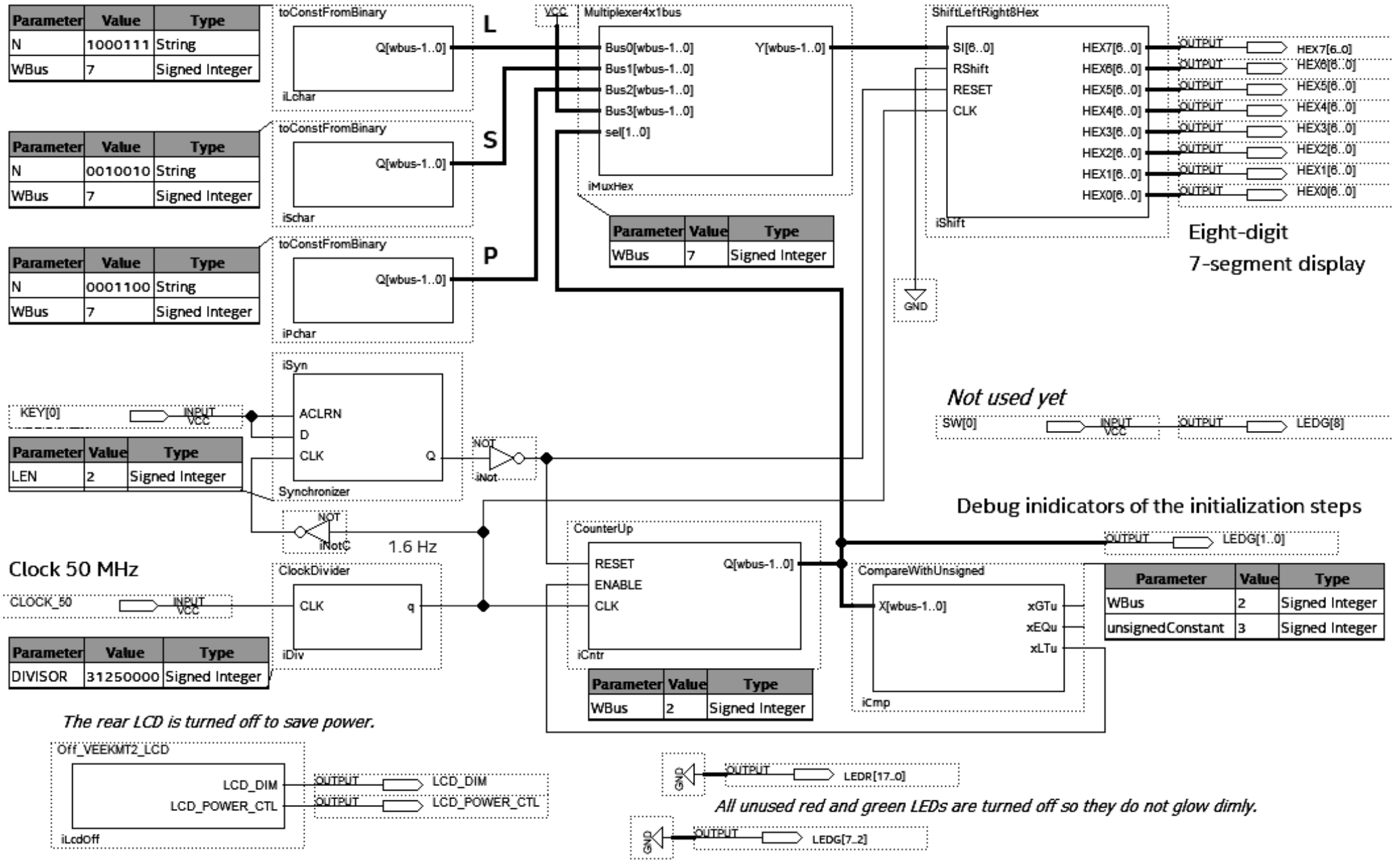



<u>Connect the schema and improve its wiring to earn 4 points.</u>

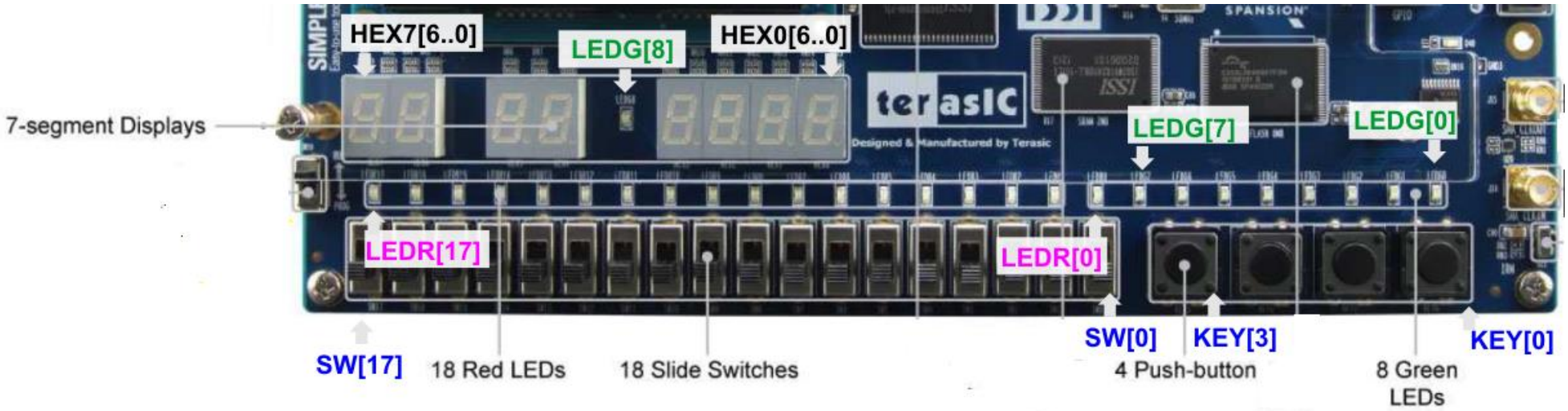
1) Correct a small error in the schema so LSP is shown continuously. *Hint: You will find it near a tiny component*.
2) Connect the SW[0] switch to the RSHIFT input of the shift register. Then, modify the circuit so that LSP shows correctly from startup, i.e., from pressing the reset KEY[0] for both SW[0] settings, i.e., for shifting left or right.
   The text "LSP" must remain correctly oriented and not run backwards, i.e., as "PSL."
3) Add the Lcd16x2Text module from the DCE library that will display your name.
4) Change the advertisement to "FEL" or to any word with three different characters.

**Note:** The coding of 7-segment displays is given at the end of the assignment.

The previous diagram — enlarged and optimized for black-and-white printing



Selected inputs and outputs of our Veek-MT2 board

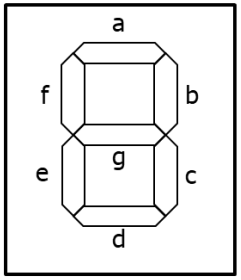



**Inputs**

- The slide SW[isw] switches give logical '1's when they are up.
- On the contrary, KEY[ik] are in '0's when pressed; otherwise, in '1's.

**Outputs**

- LEDG[ig] or LEDR[ir] light up when '1' is connected to them
- All HEXn[ix] uses the negative voltage logic. They are lighting up in '0's.




HEXn[ix] / HEXn(ix)

| ix | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|---|---|---|---|---|---|---|---|
| segment | g | f | e | d | c | b | a |

On the Veek-MT2, a segment is on, when **HEXn[ix]='0'.**

Note: In block diagram schemas, indexes are enclosed in [], but in VHDL code, they are surrounded by ().