CornellX: ENGRI 1210x The Computing Technology Inside Your Smartphone   🏠 **KarenWest** ▼

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Syllabus   **How to Use Jade**

LAB 7. ISA: PC Register (Loadable Register w/ Set/Reset to 0x3000)

The PC register is a 16-bit loadable register that is loaded when LD_PC = 1, and otherwise retains its current value. The RESET input causes the PC register to be initialized to 0x3000, the location of the first instruction in the program.

Construct the PC register from 16 of your set/reset loadable registers, and when the RESET signal is asserted, the set signals should be 0x3000, and the reset signals are the opposite, 0xcfff. This is similar to the R4 register in the register file that you designed.
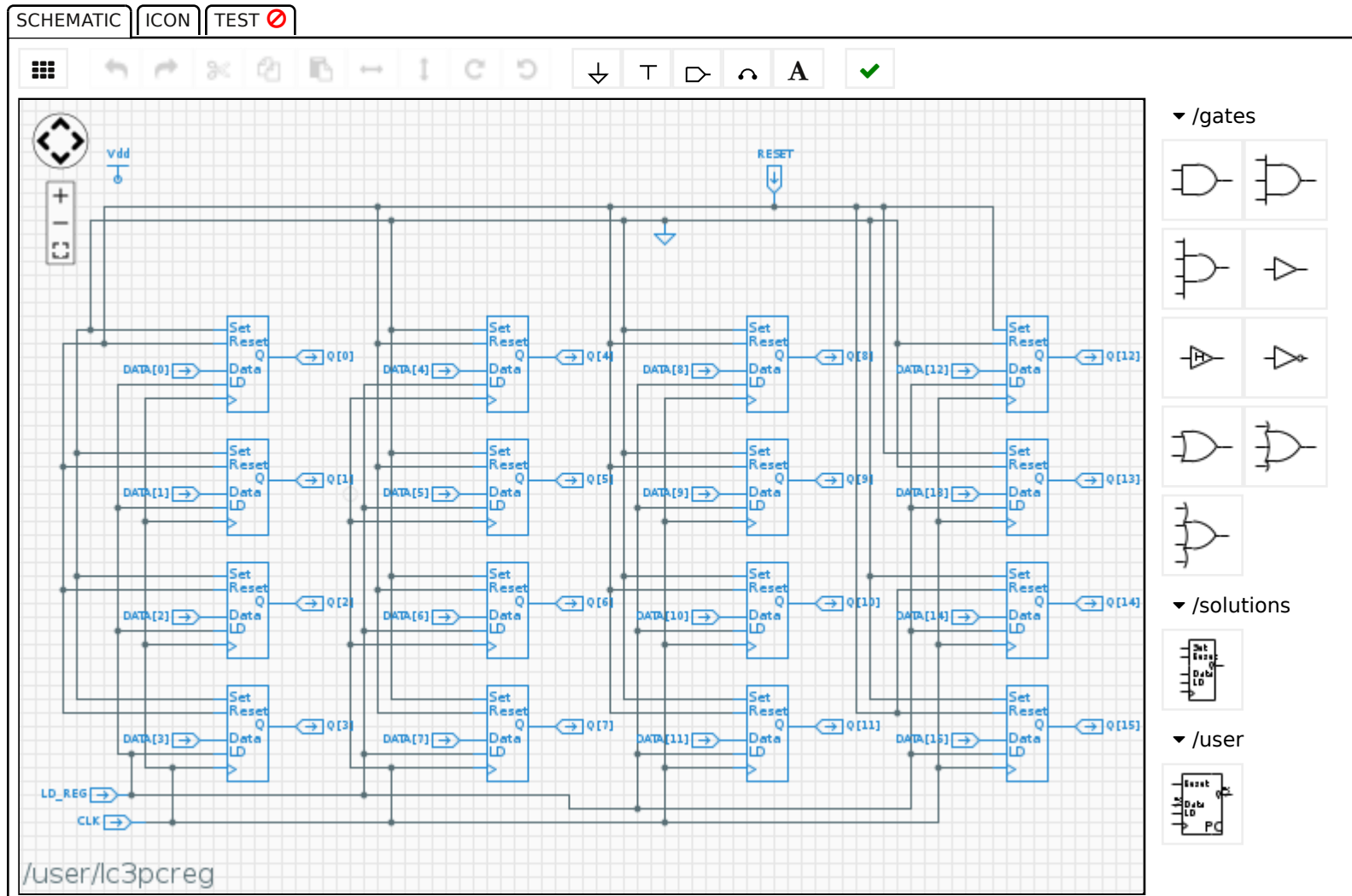
        SetBitsforData[15:0]   0011 0000 0000 0000
        ResetBitsforData[15:0] 1100 1111 1111 1111

Don't forget you can label wires to tie them to ground and vdd. For example, if you double click on a wire and name it: "gnd,vdd,gnd", it would be "010".

After testing and checking, save this as a library component. We will need it in future labs!

LC3-LITE PC REGISTER (1/1 point)

Module: /user/lc3pcreg ∨

SCHEMATIC | ICON | TEST 🚫

Help

/gates

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/user

/user/lc3pcreg

Click component to select, click and drag on background for area select, shift-click and drag on background to pan

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