ECE 4623/5623
Homework #2 (Due: 10/3/2017)
Register Transfer Structure

1. Build a register transfer structure that does the following things:
   (a) **Store** values into memory locations (registers).
   (b) **Retrieve** and display values from registers.
   (c) **Copy** values from one regsister to another register.
   (d) **Clear** values from registers.
2. In class we decided as a group to use 4 switches for the instruction, and 4 switches for each register address. In the case that we are using instructions that require register values we decided to use 8 switches. So, we have 16 instructions and 16 8-bit registers.
3. What are the requirements of each instruction?
   (a) Store value. Requires two inputs: (1) 4-bit destination register address and (2) 8-bit register value.
   (b) Retrieve and display value. Requires one input: (1) 4-bit register address.
   (c) Copy value. Requires two inputs: (1) 4-bit source register address and (2) 4-bit destination register address.
   (d) Clear register contents. Requires one input: (1) 4-bit register address.
4. How will the computer know when to read the information on the switches? I would click a button. The "manual clock".
5. How will I display the values? Use the 7-segment display.
6. Can I implement this differently from your suggestions? Yes, be creative.