CE1: Hands-On Computer Engineering

Research Problems 2

1. Undergraduate research. Take a look at the 2009 projects on the surf-it.soe.ucsc.edu web site. Which two are the most interesting to you and why? If you wanted to get involved with this coming SURF-IT how might you do it? What’s integrative system design?

2. In class we used LEDs, which stand for “light emitting diodes”. What is another kind of diode and what does it do?

3. Practice your use of binary by converting the numbers 12, 15, 27, 13, 100, 2, and 37 into binary form.

4. Read about how to convert binary numbers to hexadecimal (base 16) numbers on the web (cite your sources!) if needed. What are hex numbers 0xE2,0x33, and 0x2B in decimal (do this by hand!)? What are they in binary? Don’t just use a calculator, show how you did it.

5. Post a greeting to the class forum (see class website) introducing yourself to the other classmates. Post a joke or cartoon as well. Make a new post, meaning don’t just reply to an existing one. For the subject line put:

   “your name’s 1st post”

Notes: 1) Remember, you should be typing your homework (except for ones that require drawing or the number conversion ones, you can handwrite those).

2) You should cite any sources; this is a good general practice to get into.