To Do List: Week 4

Coursework:

1. **Assignment 5: Bill of Materials**
   Due Friday at 11:59pm. Assignment upload portal: link
   Notes:
   1. Package – Electrical package, NOT packaging material
   2. Value – Applies to passive components (10kΩ, 100nF, etc.) NOT monetary value/price

2. **Assignment 6: Electrical Overview**
   Due Friday at 11:59pm. Assignment upload portal: link
   Notes:
   1. Electrical Overview – Describe the hardware used by your team's project design
   2. Electrical Considerations – Detail power, voltage, operating frequencies, etc.
   3. Interface Considerations – Detail interfaces, types, data rates, etc.
   4. System Block Diagram – Include a computer-generated block diagram (LibreOffice Draw, Google Draw, and Microsoft Visio are all good flowcharting tools for this task)

Manlab:

1. **PCB Footprint Library and Electrical Schematics:**
   1. The individuals responsible for the electrical schematic and PCB layout of their teams' designs should bring their own laptops to mandatory lab this week and work through the Eagle PCB Tutorial, posted here: https://engineering.purdue.edu/ece477/Resources/T1-EaglePCBLayout.zip
   2. By Friday at midnight of week 6, students are expected to have a completed Eagle parts library and a modestly-developed electrical schematic for their team's project. Students should be able to demonstrate substantial progress towards this objective by mandatory lab hours of week 6.
   3. Upcoming deadlines for the PCB Design and Layout (Post all completed items to student project websites):
      - **Week 6:** Eagle Tutorial Completed, Eagle Parts Library Completed, Electrical Schematic preliminary but substantial effort has been made
      - **Week 7:** Electrical schematic completed, PCB Layout preliminary but substantial effort has been made
      - **Week 8:** Midterm Design Reviews. PCB Layout completed.
      - **Week 9:** Final tweaks to Parts Library, Electrical Schematic, and PCB Layout made. PCBs submitted at end of week.

2. **"Show me a thing":** For individuals not directly involved with the hardware design process, prototyping progress is expected of students each week. Students should be able to demonstrate a prototyped system and describe progress made on the system to course staff. For any technical issues requiring support, students are expected to fill out a Tech Support Request, which can be found on the student web template in Files/support.

3. **Component Ordering:**
    1. Component ordering should not be done until after manlab hours this week (this provides course staff with the opportunity to review component selections and flag any issues)
    2. Have one student from your team place a components order. ECE477 provides a $425 reimbursement for parts ordered by the course which is described in detail here: https://engineering.purdue.edu/ece477/Course/Process/ReimbursementProcess.pdf
    3. For each major part used by your team (excluding passive components), obtain a copy of that part's datasheet and host it on your project website.
    4. For each part used by your team (including passive components), identify an acceptable component within your PCB CAD tool for use in an electrical schematic. Any parts which cannot be found will have to be created. Develop a parts library and create all necessary schematic/layout footprints for your parts.