To Do List: Week 7

1. **Midterm Design Reviews**
    1. Design reviews are coming up in just a few short weeks; students are to provide their availability for midterm design reviews; an online form has been set up to collect student responses. Students should indicate their availability for midterm design reviews here: https://purdue.qualtrics.com/SE/?SID=SV_86udw189FcQm8HH
    2. Students will need to be available for 3 design review slots (slot assignment will be performed based on availability):
        1. 1 presentation slot, in which they present their midterm design review with the rest of their team
        2. 2 review slots, in which they act as a peer reviewer for the design review of another team
    3. Midterm design reviews are next week. Students should download a copy of the Midterm Design Review template file, available here. Guidelines for the Midterm Design Review presentations are available here, and an evaluator rubric for the Midterm Design Reviews is available here. Dress for the midterm design reviews is business professional.
    4. During Midterm design review week, normal ECE477 lectures and mandatory labs are suspended. Additionally, students are not required to complete progress reports for the week of midterm design reviews (week 8).

2. **Assignment 8: Software Formalization**
   Due Friday at 11:59pm. Assignment upload portal: link
   Notes:
    1. Utilization of Third Party Software – Describe to us what third-party libraries and sources you will be utilizing from others. Don't forget to discuss licensing requirements, if necessary.
    2. Software Components – Break apart the software and firmware of your design into major components (e.g. Memory I/O, Motor Control, Bluetooth, etc.). For each component, discuss what the functions of that section of software have to do (in the previous example, Bluetooth, for example, would require some form of initialization, device discovery and pairing, transmit, receive, and some sort of function to listen to the connection and take action if the connection is lost). For each component, describe its status (Is it written natively for your hardware platform? Does it need to be ported from a different platform? Is it being developed for your team and thus must be written from scratch?)
    3. Testing Plan – For each of your software components, discuss steps necessary to verify functionality of your software components. This could be test methods and setups, specific test cases of interest, or other methods that will serve to allow you to test your code. Know how each piece of your software will be verified.
    4. Software Component Diagram – This bears some similarities to a UML chart or a function call tree/structure. Arrange the various components of your design hierarchically and describe what components use other components. See the assignment 8 example homeworks for more information.

3. **Electrical Schematics and PCB Layout**
   1. By Mandatory Lab of this week, students are expected to have a completed their Eagle electrical schematics and a mostly-complete PCB layout for all of their team's circuit boards.
   2. Upcoming deadlines for the PCB Design and Layout (Post all completed items to student project websites):
      - **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.

4. **Software Prototyping**
   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.

5. **Progress Reports**
   Progress Reports are due Fridays at midnight (same time as homework assignments). Progress reports should follow the course calendar. For any questions regarding the content to be included within a progress report, students may consult the Progress Report Policy, available here: https://engineering.purdue.edu/ece477/Course/Policies/ProgressReportPolicy.pdf