

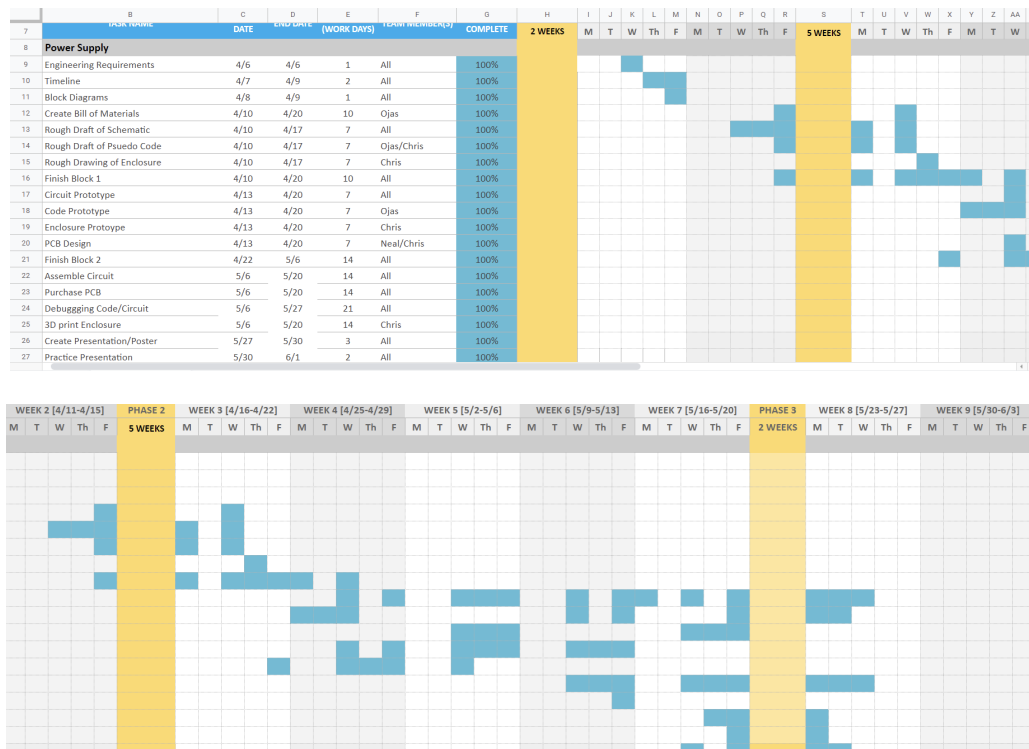
PC Controlled DC Power Supply

Overview:

The overall goal of this project was to design a 2-channel PC controlled power supply to output DC voltage with a range of 2-14V and a maximum current of 1.5A. In addition, we set a few of our own requirements, adding the ability to detect and display temperature and power within the power supply, as well as the ability to demonstrate variations in voltage and temperature using LEDs.

We constructed a high level block diagram to make the process of construction easier to manage. Dirar worked on the step-down transformer and button configuration. Ojas worked on the LCD display and the microcontroller, managing all of its inputs and outputs using code. Chris worked on the 3D print of the enclosure in addition to the temperature sensor PCB and LEDs for the display. Neal focused on the AC-DC converter and voltage regulator. This project had many parts, but by dividing it into smaller parts that each member could individually take ownership of, it allowed for us to use our strengths and then simply connect our blocks together once we had all finished. Overall, we were happy with our design process and final outcome.

Project Timeline:



Key Lessons:

- Team Communication/Coordination
- Time Management
- Hardware Testing Protocol
- Progress Tracking