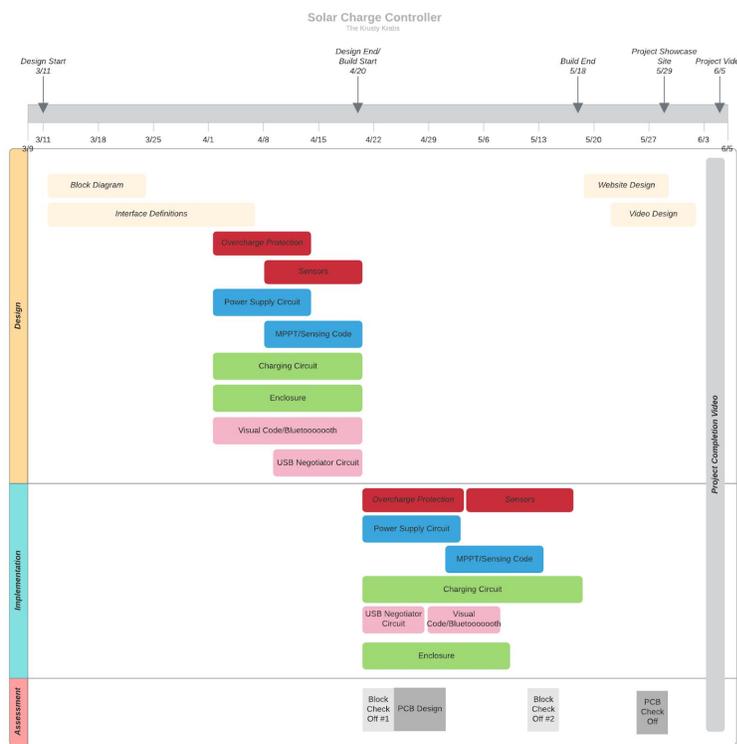


## Project Summary

A solar charge controller controls the amount of voltage coming into a system from a solar panel. The purpose of this is to keep the power from the panel at the maximum possible.

After deciding on what extra features to implement, we divided the project into blocks and began assigning them. Next, we created the first drafts of the interface definitions and block diagram. From here, we each began researching other implementations of our blocks to get a sense of how they all worked. Finally, we set to work on our blocks. As we did so, we realized that we needed to change our block diagram and interface definitions to reflect the actual way the blocks would interact with each other. This happened several times throughout the project as we became more knowledgeable about our blocks and their requirements.



Designing a complex system like this remotely came with some challenges. Not being able to test, or implement each other's designs together were huge roadblocks. Only by following a rigid set of interface definitions were we able to create a system that when put together, should theoretically work. This is a very similar method that is followed in the industry with larger projects that cannot be completed by smaller groups of people. With larger and larger tasks, the need for further division of work becomes more and more necessary. Having everyone on the same page when it comes to system requirements as well as how each piece interacts with each

other is key to creating a successful design and productTimeline

One lesson we've learned from this term is how to work remotely. Being separated has forced us to learn different styles of communication, as well as remote tools such as Zoom and Slack. Another lesson we learned is how to better and more effectively collaborate on code that will be used by multiple blocks of a project that are being worked on by different people. Finally, all of us gained engineering skills such as running simulations with LTSpice or creating PCBs with Eagle.