

Project Summary

For this project we were tasked to develop an automatic pet door that could let a pet go in and out as they pleased. The door should work without human interaction, and be able to lock itself while withstanding a force of at least 30 lbs for security. It was also recommended to keep track of the usage and alert the owner if it was being used by the pet or not. We also took it upon ourselves to create an app that would alert the owner of the usage of the device and keep track of it on their phones.

We began by dividing the workload appropriately and each took on a portion that would not require much of each other's work as we tried to comply with COVID restrictions. This allowed us to develop and implement our own artifacts for later integration. Once we each had our working parts we came together and put it all together. We all were very familiar with our own work so this did not take long to do.

We had a schedule that we kept for working times on the project. This helped us keep track of how we were doing with the project. We met at least once a week to update the other team members of the progress, and discuss any difficulties we were experiencing. An image of the timeline can be seen below, with work days displayed in yellow. We decided to work on the project for at least an hour on each day dictated by the progress we made.

Project Timeline

| Design Phase | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|------------------------------|--------|---------|-----------|----------|--------|----------|--------|
| week 12 (Block diagram) | | | | | | | |
| week 13 (Schematic) | | | | | | | |
| week 14 (PCB Board) | | | | | | | |
| Build Phase | | | | | | | |
| week 15 (soldering) | | | | | | | |
| week 16 (circuit connection) | | | | | | | |
| week 17 (coding & testing) | | | | | | | |
| Debug Phase | | | | | | | |
| week 18 (video) | | | | | | | |
| week 19 (presentation) | | | | | | | |
| week 20 (Rest) | | | | | | | |

Overall this project helped us develop the time management and technical skills. Along with showing us what it was like to work with customer requirements and not our own goals. The project highlighted the essence of working as a team and trust between team members as an essential part of any project.