

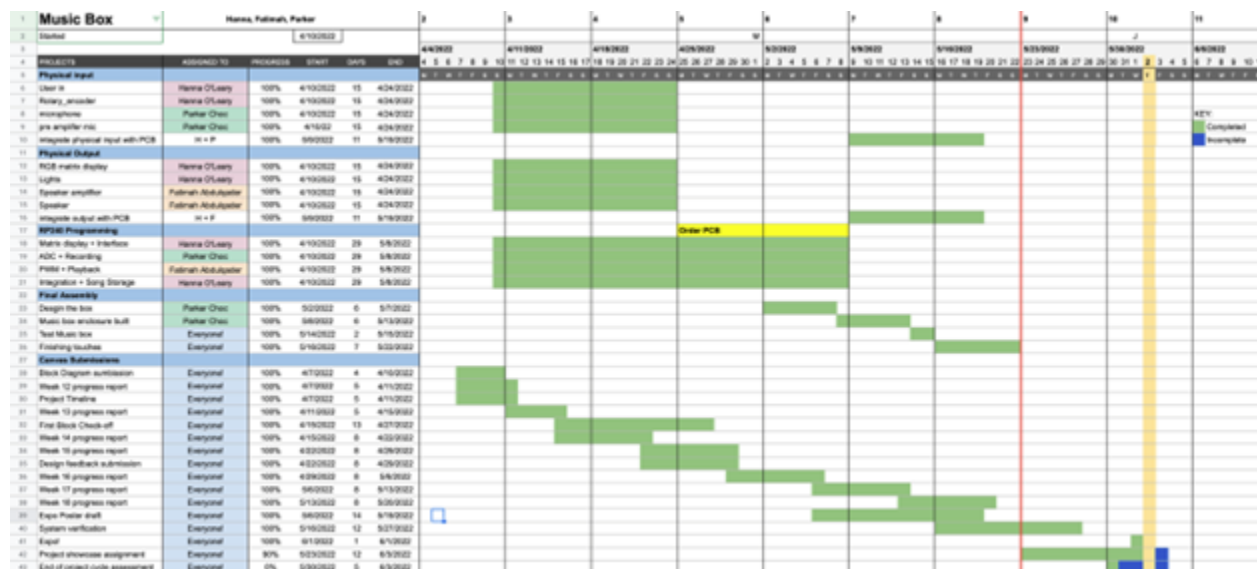
## Executive Summary

Our team was tasked with creating a music box that can play and record 20 second songs to a high degree of accuracy. Additionally, our design challenge was to make an intuitive user interface, robust enclosure, and aesthetically pleasing final product.

Our first development phase was design. As a group we approached this challenge by first drawing up a “black box” diagram with all inputs and outputs of the system. We then broke the system down into several different blocks such as a microphone amplifier block, keyboard input block, etc. Next we defined the connections between each block and some specific requirements for each block. We divided up the blocks amongst the team members based on each other’s strengths and went to work.

Our second development phase was construction/revision. Each member focused on designing and constructing our own assigned blocks while taking time to meet every week to share progress and get advice. We revised our blocks too in this phase, strengthening our designs.

Our last development phase was integration. Once each block had been constructed and properly tested, we were able to begin thinking of the project as a cohesive system. This meant connecting blocks together and confirming that each customer requirement had been properly met.



As a team, we learned the importance of communication. Staying in touch and sharing updates helped us stay on the same page so that the project could come together smoothly. Time management was also an important lesson: we learned we had to allocate extra time for tasks because something inevitably goes wrong with projects like this. Indeed this project was no exception. Midway through the project we changed our file storage system and had we not allocated extra time we would not have finished.