Testing Implementation

1. First, we tried to test each component so we can get use to the code for each component.
2. We tried the sound sensor and we tested what is the perfect value we need for our threshold .
3. We were having values, but we found out that the values we were getting are not accurate and the sound sensor we were using is broken.
4. The we looked at how we can use a speaker and link it to our Arduino but we had no speaker and because of Covid-19 and lockdown we could not buy a speaker from any of the shops in town because all the electronic shops are closed .
5. So instead of using a speaker we decided to use a buzzer but the issue we had with using a buzzer is that the sound the buzzer produce has limited harmonics .
6. We tried to make the buzzer sound better and we did research around it, but we could not make it sound any better ,so we used it(to at least show our idea) although the sound it produces will wake the child and will not help it to sleep.
7. Also there was another issue with making the buzzer produce a melody is that we need to have a for loop for all the notes which effected on the our code and the logic in our code , so we decided to break it down to simple and short loops and we finally made the buzzer produce a nice melody(note that we tried to look for melodies for children like “twinkle twinkle little star” but we did not find so we used The game of thrones song theme instead to prove our concept .
8. We also found that the delay methods were the issue in so many places where we were not getting values from the Arduino or the Arduino is resetting the values to zero and all that was because of the delay methods .
9. We faced a logical issue in our code , so we decided to have a meeting and break the code to parts, and we made a flowchart so we can have a plan to follow and we finally fixed the logical issue.
10. Then we tried to add more than one sensor to the spread sheet , so we changed the api link and the token id as well and also the API request link in the Arduino to match the API link we adjusted in the “my scenario “ in the pushing box website.
11. We had an issue with not getting values from the Arduino and we were not getting values in the Serial monitor as well, we tried to do all the steps in Lab5 sheet again to make sure we did the right steps ,but the problem is still not fixed ,finally after 3 more attempts on trying to get the Serial monitor work we found out that the Arduino is the problem and it was not running well, so we changed the Arduino and it did work totally fine and we our values in our spread sheet .
12. Finally we added comments in our code and deleted the extra stuff that we do not need , and we left some of the code that we are not using in this minor project in the project file because we are going to need it for our major project.