**Analysis Questions:**

1. What are some similarities and differences between playing music and writing a program?

One similarity is that there are there are notes (e.g. whole notes, half notes, etc.) when playing music and writing a program, but one difference is that when playing music they are denoted as musical markings on a page, where in the program they are midi note numbers that correspond to a tone.

1. Which instrument did you like the best and why?

The piano since the notes felt to me the shortest, and had the least amount of ‘overlap’.

1. What question(s) of your own did you answer while writing this program?

I figured out how to quickly convert musical notes to midi using a table I found online.

1. What unanswered question(s) do you have after writing this program?

This was a very redundant task, figuring out the duration and tone for every note. Is there a program that can do this much easily?

**PMR:**

* The main point of this assignment was to play a song translated into the midi protocol, the specific song being the American National Anthem.
* This assignment relates to a real-life situation since though midi is being phased out in general, many musical ensembles use MIDI to replicate how a piece of music should sound.
* I have grown as a programmer as I am now able to play simple sounds with different instruments with Java.
* The biggest problem I encountered was finding where I had missed one duration, throwing the entire song off. The only way to fix this was to excruciatingly go though each note and make sure it was the right duration.
* One thing I would do differently in the future is I would map every note and duration out beforehand, that way if I accidently delete one note or duration, I can refer to my sheet.
* This assignment could be extended by having multiple parts and instruments play at once to make a piece harmonize.