Team Name
- Eight Bit Boiz (64 bit where it counts)

Team Members
- Nick Amendola
- Jacob Christiansen
- Noah Lane
- Malcolm McKellips
- Nick Vomund

Description
- We are developing a rhythm game where the user is shown drum notes to a specific song, and must tap along in order to earn points. Points will be awarded based on the accuracy of your timing and the amount of drums you are playing with. Once the song has ended, users can save their score along with a username that will be stored in a database.
- The game will be contained on a local computer and will at first work with standard keyboard input. After we have a working game, we are planning on building hardware that will work as a drum pad. We will achieve this by creating a casing for a small external keyboard. This product will be a helpful tool for practicing and understanding drum patterns and the way they can affect how music sounds.

Vision Statement
- To explore the Unity engine and create a polished game that gives a fun experience for players.

Motivation
- Our motivation behind this project is that we wanted to make a game that captured our interests in music. Originally one of our ideas was to build an interface for a midi device like a drum pad and from there we thought we could make a game like Guitar Hero using that interface and device.

Risks
- The risks we run by doing this project are that as a team we have little experience with accessing databases and we are trying to build a physical interface from scratch which could be complicated and time-consuming.

Risk Mitigation Plan
- We plan on developing our application starting with the most minimalistic working version; notes on a screen and correctly sensing input, and from there we can expand to make the game better looking and ported onto a raspberry pi with custom hardware.

Version Control

- [8bb-logs](#)
- [8bb-milestones](#)
- [8bb-project](#)

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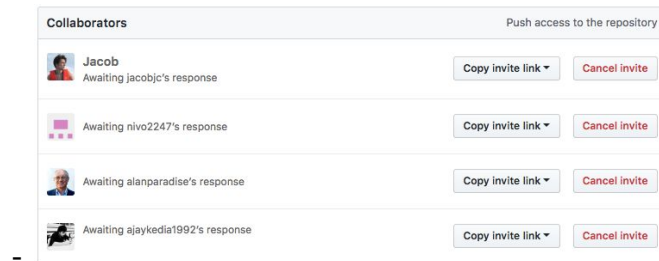
Development Method

- We will use an agile/scrum approach with weekly scrums to discuss and organize our project. We will start by creating a working application that is very bare bones, with a simple user interface and keystrokes as input. Then, we will improve our project in the next iteration by adding features and beautifying the user interface. We will continue to iterate in this way for the duration of the project.

Collaboration Tool

- We will use GroupMe as a coordination tool since its easily accessible from all platforms (mobile and desktop).

Proposed Architecture

- On the backend, we will use SQL to save high scores in a database and pull songs to play from a database. We are considering java or also unity as the primary backend language for powering the game. The front end will take the form of a GUI where the user can see notes and press the corresponding keys when necessary. Time allowing, we might implement a raspberry pi or wireless remote, and use it to receive the user input and transfer it to our program via serial or Bluetooth communication. Our program will be deployed locally on a PC.