Introduction

Part 1

1.1 Problem Statement

What problem is your project trying to solve:

How might we display the correct order and timing of notes on the instrument for new kalimba users so they don't have to look back and forth between the instrument and the music sheet to play a song?

- **Who has the problem?**
    - new kalimba users, kalimba users learning a new song
- **What is the problem?**
    - It is hard to learn songs while looking back and forth at the music sheet and the instrument, and memorizing can be laborious.
- **Where is the problem occurring?**
    - In the inability to easily focus on two different places at once.
- **When is the problem occurring?**
    - When a kalimba user is trying to learn a new song
- **Why is it important?**
    - It will save time, and make learning new songs easier/less laborious
- **How will it be solved?**
    - Adding light features that show which note is to be played next and when they are to be played

1.2 Intended Users and Uses

Persona (1): Someone with music experience that wants to enjoy picking up a Kalimba and playing music without putting in a lot of time or effort. Someone looking to reduce stress.

Needs (2) and User Benefits (3): A person, who has an interest in music, needs an easier and faster way to learn how to play the kalimba because they have a hobby for learning new skills, and they are struggling to learn efficiently without giving effort beyond what is desired.

This is the intended user for our project at this point, should we have time later in the project to address the needs of other personas (i.e. maybe four-year-olds or advanced musicians) we can. It will be easier to design for the general user first and then tweak features later to address non general user than it would be to design for a bunch of different users at once. Obviously, the general user (i.e. us) that would benefit from Twinkle Tines and anyone who enjoys the music played would receive the secondary benefits. They will also have reduced stress and frustration by easily being able to play music and relax. The creators would also benefit intrinsically from seeing people enjoy the fruits of their labor.

- hobbies & interests: the user enjoys music/instruments
- demographic: open to anyone with new features added, needs a working digit
- motivation: supposed to give anyone instant gratification for being able to pick it up and play a song
- personality & emotions: creative personality, hopeful, adventurous, like to learn new things
- values: gain new skills and enjoyable distractions/relaxations

Empathy Map:

- **Who are we empathizing with?**
    - new kalimba users
- **What do they need to do?**
    - learn to play songs on the kalimba
    - play songs soundly
    - be satisfied with their own ability
- **What do they see?**
    - reading music notes, sheet music, youtube videos of others playing the kalimba
- **What do they say?**
    - "I want to be able to play a song?"
    - "I want to learn a new instrument?"
    - "That look fun to play?"
- **What do they do?**
    - attempting to learn songs, researching how to play, struggling to play songs while also reading the sheet music
- **What do they hear?**
    - others playing on youtube, playing runs, choppiness of trying to play songs themselves
- **What do they think?**
    - it's difficult, it's harder than I thought
- **What do they feel?**
    - frustrated
    - confused