

BASIC DETAILS

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First Language – Hindi

Location ,Time Zone - New Delhi, India ,India Standard Time (GMT+5:30)

Past involvement with Sugarlabs -

Wrap canvas

<https://github.com/sugarlabs/musicblocks/pull/2169>

Scroll-xy block fix

<https://github.com/sugarlabs/musicblocks/pull/2156>

Pie-Menu scroll fix

<https://github.com/sugarlabs/musicblocks/pull/2186>

These pull requests have helped me understand the sugarlabs/musicblocks codebase better. I now feel comfortable with sharing ideas and collaborating with other authors and mentors in sugarlabs.

I am fairly fluent in javascript (es6) and a music enthusiast, I feel this project would be perfect for my summer. I may not be the best at programming ,but something that separates me is my eagerness to learn. I am always looking for opportunities to learn and grow .

Resolve 100 issues in Music Blocks

Overview

MusicBlocks has a lot of issues right now and the aim of this project is to fix these issues efficiently and keeping it easily maintainable in the future. I would like to work on these issues with a well-defined strategy and bring down that annoying 200+ number.

The 200 issues in this repository can be divided into subcategories which can help make this process efficient and swift.

EASY	MODERATE	DIFFICULT
There are some trivial issues that are easy to solve and these usually deal with widget issues, graphic problems or small bugs.	These constitute the major part of the issue list and require 2+hrs of work	This category contains mainly the future milestone projects. These issues need to be discussed further.
These issues require an hour or two of each coding and testing.	These issues will require careful implementation and extensive testing before merging.	These issues will require some design research and discussions.

To understand what I mean by easy and difficult problems, I believe the following examples will help:

Easy: [G_5 plays too short #1973](#),

Moderate: [Way \(for teachers\) to lock blocks #1949](#),

Hard: [Scale Degree Design Path Proposal #2058](#)

- The Scale Degree block proposed by [@pikurasa](#) has great utility and can be implemented with a map tool that maps notes to specific numeric values. I would require some help from my mentors to design this block. Also we can ask the user for defining some out of mode notes.
- Another problem i encountered was the crowding of the palette menu with blocks that can be combined in one and their specificity can be provided as a option

For example - the interval menu has been crowded with diminished/augmented 2-8 blocks ,this can be resolved by making a piemenu/input label to ask which interval the user needs.

- One Major enhancement would be [to Accept MIDI input #1899](#), as a lot of kids have access to midi musical keyboards now and a visual interpretation of their work could help them immensely

With the help of the MIDI API (web MIDI API (<https://www.w3.org/TR/webmidi/>) which allows us to send and receive MIDI messages across devices,

We can implement a widget which looks like the keyboard in the current custom mode and show real time playing of the notes.

- I would also love to propose another widget that lets students import .mid/.midi files from an online source or any other software and let them play with different instruments available on MB, somewhat like (<https://onlinesequencer.net/>), this could make understanding of timing and notes much better.

A. This could be achieved with the help of tonejs midi library which can convert midi data to json.

B. This json data would be used to make a rhythm with unspecified instruments .

C. A widget with instrument selectors on each note can then specify the tone to be used for each note

- Some other enhancements that I believe will be helpful are:

Animated turtle travel :Current implementation of turtle movement in turtlejs doesn't show any animations while moving from one place to another .Showing animations will look better.

More Interactive wheelnav : Wheelnav js provides a lot of options for making attractive piemenus ,I believe the current menus look very dull and we can try to improve them.

Daily facts or tips : Just like the tour window, we can implement a widget that gives out history facts about music or notes for a famous beethoven melody for students to work on, every session.

Proposal Timeline

Before April 27:

- Organizing my strategy for some big proposals.
- To completely familiarize myself with SugarLabs/musicblocks
- Get familiar with some music terms that I have lost my grasp on.

April 27 – May 18 (Before the official coding time):

- I will try to sort out my goals as clearly as I can.
- I will try and fix some easy and moderate level issues on my own during this time.
- I will talk to my mentors about some major issues and discuss the best way to go further with these issues.
- I will also present my ideas to the mentors regarding some much needed enhancements like – “animated turtle travel ,more Interactive wheelnav and daily facts or tips ”

May 23 – June 15 (Official coding period starts):

Phase 1:

- I will start on some of the major enhancements in the beginning .These include USB MIDI access and midi file input.
- I will resolve most of the Small issues during this period.
- I am planning to do 8-9 issues per week.

June 15 – July 13:

Phase 2:

- I will complete patching of all easy to moderate issues during this period.
- I will also be in constant contact with my mentor during the three month period with weekly reports and review invitations, while following an agile development strategy.
- I will now start to focus on the scale/mode issue.

July 14 – August 3:

Phase 3:

- During this two week period I will start rapping up my work on the major enhancements including (scale/mode and midi input) and remove any final bugs or issues.

August 3 – August 17 :

- 2 Week buffer to compensate for any delay.
- Otherwise I will work on some issues we have encountered along the way.

I would love the opportunity to work with sugarlabs this summer and help the open source community in the best way i can, by contributing ,

Thank you for your time .