# PROPOSAL FOR GSOC 2023

## Maintenance/bug fixes for Music Blocks 3

## BASIC DETAILS

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- **Contribution to MusicBlock 3**
  - Fix project remove after saving as png [Chrome] #3034 [https://github.com/sugarlabs/musicblocks/pull/3219] [merge]
  - Corrected an error in the step pitch svg file #3200 [https://github.com/sugarlabs/musicblocks/pull/3200] [merge]
  - Fixed the searchWidget generating behind the palette [https://github.com/sugarlabs/musicblocks/pull/3199] [merge]
  - Corrected the floor tom drum name to its standard name [https://github.com/sugarlabs/musicblocks/pull/3194] [merge]
  - Corrected a wrong link in the music blocks guide [https://github.com/sugarlabs/musicblocks/pull/3157] [merge]

- **ABOUT ME**
  I'm a mathematics student of Obafemi Awolowo University, a music enthusiast and a proactive team player with  passion for problem-solving. My skills in JavaScript and proficiency in utilizing MERN technologies are reflected in the diverse web applications I have built. While I may not consider myself the best programmer, my meticulous attention to detail and eagerness to learn make me a standout candidate.

- **Community participation**

  I am an active and proactive member of the tech community, serving as a Postman Student Leader, core team member of amazing tech community. I am also a ReactJS frontend mentor at the Google Developer Group Ibadan, where I help aspiring developers grow their skills and achieve their goals to the best of my ability

# PROJECT DETAILS

## [Maintenance/bug fixes for Music Blocks 3]

As part of my GSOC project, I will be working on Music Blocks 3.0, an innovative music programming tool that enables users to create and manipulate sounds using a drag-and-drop interface. My primary focus will be on addressing various bugs and regressions in the software to enhance its stability and user experience. I will leverage my strong experience with JavaScript, which is the primary programming language used in Music Blocks.

By fixing these issues, I aim to have a positive impact on Sugar Labs and its educational platform. This is because Music Blocks is an essential part of Sugar Labs' educational software, and by improving its stability and reliability, I will be helping Sugar Labs to continue its mission of providing free, open-source educational software to children around the world. With the improvements, both existing and new users will have a better user experience and a more effective learning tool.

In addition to using JavaScript, I will also be utilizing html and css, and some useful APIs such as Canva API. More also, I will be working closely with my mentor, to ensure that my contributions align with their overall vision and goals for the project.

I am confident that I can address the various issues and improve the software's stability, reliability, and user-friendliness.

**ISSUES CATEGORIES**

| Category | Description |
|---|---|
| Bug fix | Issues that affect the functionality of Music Blocks 3.0 and need to be resolved to ensure the proper operation of the software. Examples include issues #3127, #3066, and #3034. |
| Enhancement | Issues that aim to improve the functionality or user experience of Music Blocks 3.0. Examples include issues #2808, #2645, and #2330. |
| Documentation | Issues that relate to improving or adding documentation for the software. Example includes issue #2403. |
| Design | Issues that relate to improving the overall design of the software, such as user interface, aesthetics, and user experience. Examples include issues #2462 and #2255. |

In summary, these issues aim to improve Music Blocks 3.0 by fixing bugs, enhancing functionality, improving documentation, improving design, and raising awareness of features. Resolving these issues will have a positive impact on the quality of the software and help ensure a better user experience for Sugar Labs users.

Some other enhancement I will suggest are:

Togglebutton for the pallete on mobile: being able to hide the pallete div on a mobile screen will create more space for users to explore with the software

I will also love to propose a potential fix for some issues such as [ Record and Generate Lilypond/ABC (Under Play) #2330 ]

1. Add a new button labeled "Record" to the music block interface.

2. When the user clicks the "Record" button, start recording the notes played during the interactive session and storing them in a list.

3. When the user is done with the interactive session and clicks the "Play" button, stop recording notes and generate sheet music using either the Lilypond or ABC output blocks, depending on which option the user selected.

In summary, the proposed fix involves adding a new feature that lets users record and save the sheet music generated during an interactive session.

I look forward to proposing fix suggestions for other issues  to my mentor.

# Timeline

**Before  May 4th    (before official coding start):**

- Get familiarized with the codebase and the Music Blocks project

- Review documentation and code of Music Blocks 3.0 to ensure I understand the architecture and how the code works.
- Start working on easy issues to get familiar with the codebase.

- Identify and understand the issues assigned for the project

- Start attending Sugarlabs  community meetings

**May 4th   -   May  28th  (before official coding start):**

- Attend community meetings and communicate regularly with your mentors to discuss your project goals, timeline, and any concerns you have.

- Communicate regularly with my mentors to discuss the project goals, timeline, and any concerns

- Identify and understand the issues assigned for the project

- Start working on the "Break note output from Musical Keyboard up into separate action blocks" issue

**May 29th - July 10th (Official coding time before the midterm evaluation):**

- Address close critical bug fixes related issue including [ dismissing an error message removeArrow() is not found ] and others identified on the repository

- Initiate work on the low-hanging fruit issues related to enhancements, with a goal of completing at least seven more issues by the midterm evaluation[ Record and Generate Lilypond/ABC (Under Play) #2330 ]

- I will allocate 28 hours per week towards working on the project.

## July 17th – August 11th

- Continue fixing more enhancement related issues

- Propose some of my personal enhancement suggestion to my mentor and start working on them if accepted

- I will begin working on documentation related issues such as [ Add more documentation for some context menus]

- Initiate work on design related issues

- As the summer progresses, I will regularly communicate progress reports to my mentors and adjust my schedule accordingly to ensure timely completion of the identified milestones.

- I plan to dedicate an estimated **30 hours** per week to the project during this period.

## August 14th – August 25th

- Wrapping up and addressing any lingering issues or bugs to ensure that the software is as stable and functional as possible

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## August 14th – August 25th

- I plan to allocate time as a buffer to account for any potential delays or unexpected issues that may arise. This will ensure that I can complete all tasks and deliverables on time and within the project scope. With this approach, I can confidently manage my time effectively, adjust my schedule if necessary, and ensure that my mentors receive high-quality work.

I plan to spend approximately 20-30 hours per week on this project, but I will adjust my schedule as needed depending on the complexity of the issues and other commitments.

I plan to continue contributing to Sugar Labs after GSoC ends. I'll be looking for opportunities to continue working on Music Blocks, and I'm also open to exploring other projects within Sugar Labs. I'll continue communicating with my mentors and the community to find areas where I can make a meaningful impact.