

Logicblocks by Techligence Robotics Task Sheet

Sound Tab UI

January 8, 2024

Important All the **underlined** text are **links**, which might not be visible based on your application, so do not forget to click any underlined text throughout the document and make sure to follow the coding standards given in the [file](#).

1 Overview

This task involves developing a system for continuous code generation as blocks are connected in the programming environment and creating a corresponding UI element that displays the generated code in real-time to the user.

2 Code Generation Logic

2.1 Development of Code Generator

- Build on already existing code generator from the feature/motion-control branch or your own one.
- Ensure the code generator supports multiple programming languages, like Python and JavaScript.

2.2 Event-Driven Code Generation

- Implement event listeners within the block-based programming environment.
- Trigger real-time code generation on events like block connections, disconnections, or modifications.

3 Real-Time Update Mechanism

- Establish a system to dynamically update the generated code in the UI as users interact with the blocks.
- Ensure the update mechanism is efficient and minimizes performance overhead.

4 UI Mockup Design and Development

4.1 UI Mockup Design

- Create UI design mockups for the code display element, considering aspects like aesthetics, placement, and size.
- Focus on user experience, ensuring the design is user-friendly and caters to both beginners and advanced users.

4.2 UI Implementation

- Develop the UI component based on the mockups.
- Integrate the component into the existing environment, ensuring responsiveness and interactivity.
- Please!! test thoroughly before submitting.

The successful implementation of this system will provide users some understanding of the correlation between block-based and textual programming.