Java Swing Circle Application

This documentation describes the implementation of a Java Swing-based GUI application for drawing a circle with adjustable size and color.

1. Introduction

This Java application features a GUI that allows the user to change a circle's diameter and fill color using JSlider components. A JTextArea displays the current diameter in either English or Polish, depending on user selection. The GUI demonstrates understanding of Swing components, layout managers, and event-driven updates.

2. Features

- Adjustable circle diameter using JSlider

- RGB sliders to control the circle's color

- JTextArea displays diameter in selected language

- JComboBox to switch between English and Polish

- Real-time updates and intuitive layout

3. Technical Implementation

The main components include:

- `CirclePanel`: Custom JPanel that draws the circle

- `ControlPanel`: Contains sliders and language selector

- `CircleSliderGUI`: Main class to initialize and run the GUI

Swing layout managers such as BorderLayout and BoxLayout are used to organize components.

Event listeners are used to update the UI as sliders are moved.

4. Testing

The application was manually tested to verify:

- Accurate drawing and resizing of the circle

- Color updates in real-time

- Correct switching between English and Polish labels

- No runtime errors

5. Conclusion

This project demonstrates practical application of Java Swing to build interactive and user-friendly GUI applications. It provides hands-on experience with event-driven programming and custom painting in Java.