Exercise 1: Color Picker

# Overview

The color picker is based on the JavaFX framework and has the following functionality:

* Set each RGB value via a slider
* Set each RGB value via a spinner
* Set an RGB value via three predefined colors in the application menu
* See the current RGB color in a color frame

The application (ColorPickerApplication) is using an observable model for storing all RGB values (ColorModel) and listening for changes in that model. All graphical input elements have an installed listener that will pass the new value down to the model. This model then will notify its subscribers (All graphical user elements) about the new value. Thus, each user element that is listening for new values must check, if the new value is not equals to the current one, otherwise an infinite update loop will happen (Feedback: How to avoid that?).

# Current Problems

The application is using a two-way data binding. Each listener must check if the received value is a new one and not the current one. Otherwise the model will be reset and the listener will be called again. This will lead to an infinite recursive behavior that is going to crash the application at some point (Beside it’s rendering the application useless).

# Class Diagram

For better readability, all internal variables were removed from the diagram:

