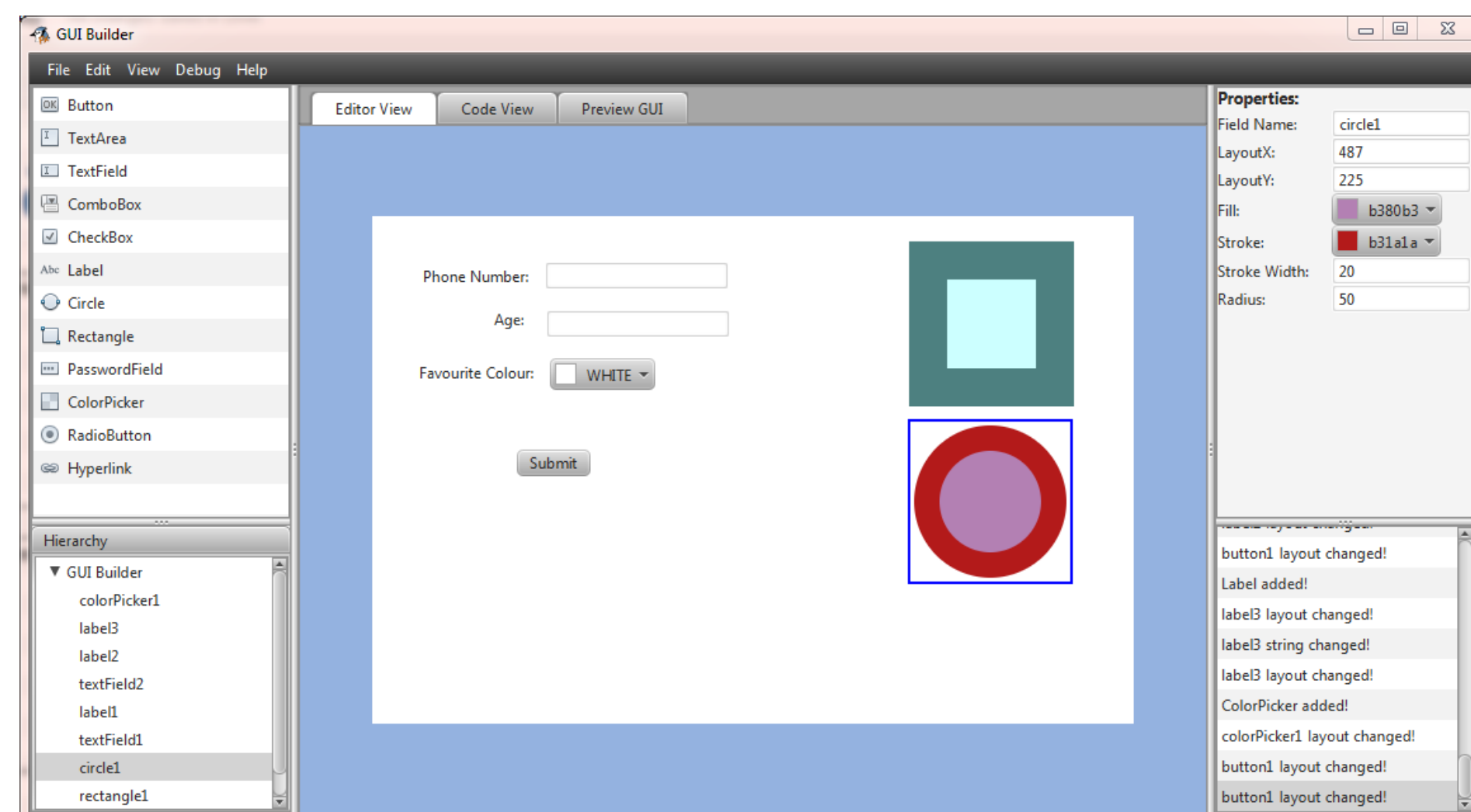# JavaFX GUI Builder for BlueJ

Our aim was to create a Graphical User Interface builder that would aid the teaching of fundamental graphical programming concepts to beginners, to produce useable, human-readable code and integrate seamlessly with BlueJ.
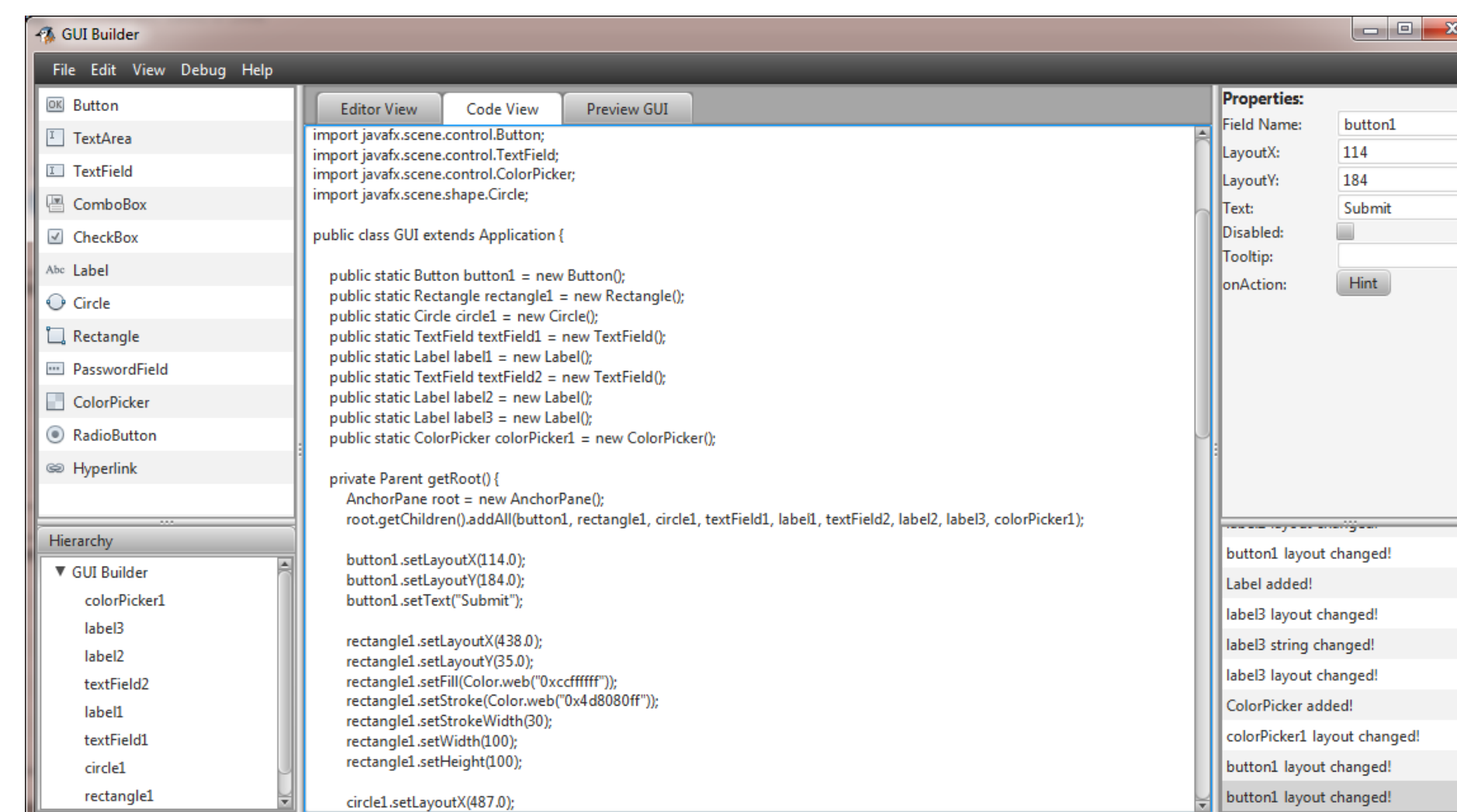
JavaFX

- JavaFX 2.2 is the latest graphical display library for Java 7 and later.
- We chose JavaFX is because it is replacing swing from Java 8 as the standard graphical library
- Cleaner syntax compared to Swing.
- We have written our builder in JavaFX to produce JavaFX and FXML code.
- We use a subset of components that are commonly used in teaching texts.
- We abstract some properties of components away for simplicity, but properties can be easily and dynamically customized via an xml configuration file.
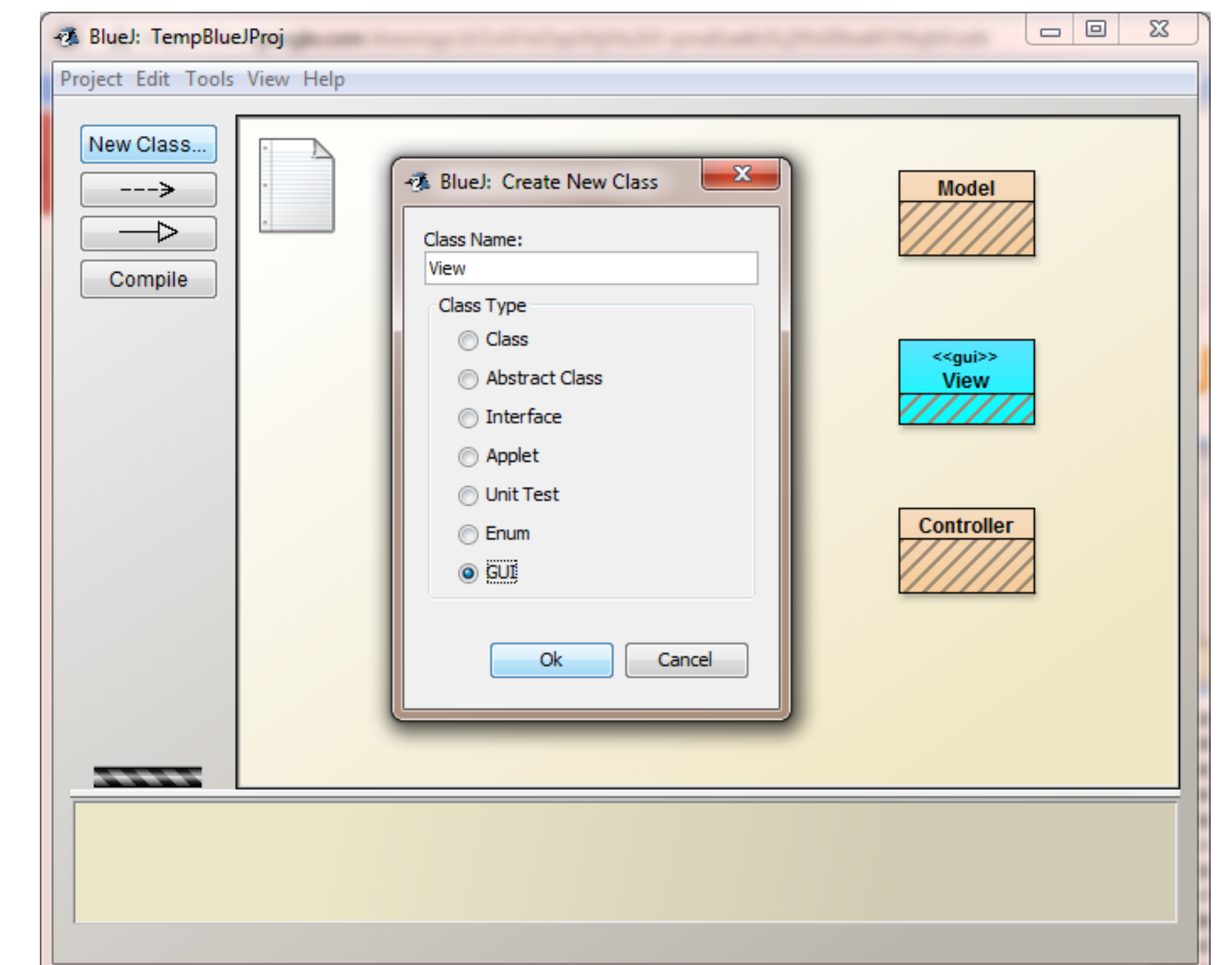
GUI Builder

- More popular tool among developers and prototypers
- Large IDE GUI builders such as NetBeans and Eclipse's produce unreadable code and aren't conducive to learning.
- GUI builders are difficult to program because they hold three representations of one design at any one time – an editable graphical view, a code view, and a live-change internal representation.
- We examined current offerings alongside teaching techniques to try to facilitate a builder that would be suitable for teaching, not just for quick results.

BlueJ

- BlueJ's ethos and target made for the perfect platform to bolt on our GUI builder.
- It forced us to think about the interaction users face when using BlueJ and how to make the transition to our software as smooth and seamless as possible.
- Designing on top of BlueJ also forced us to think about the various design decisions the BlueJ team have made, and how they improve the learning capability of users.

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