DeltaTimer (1.02)

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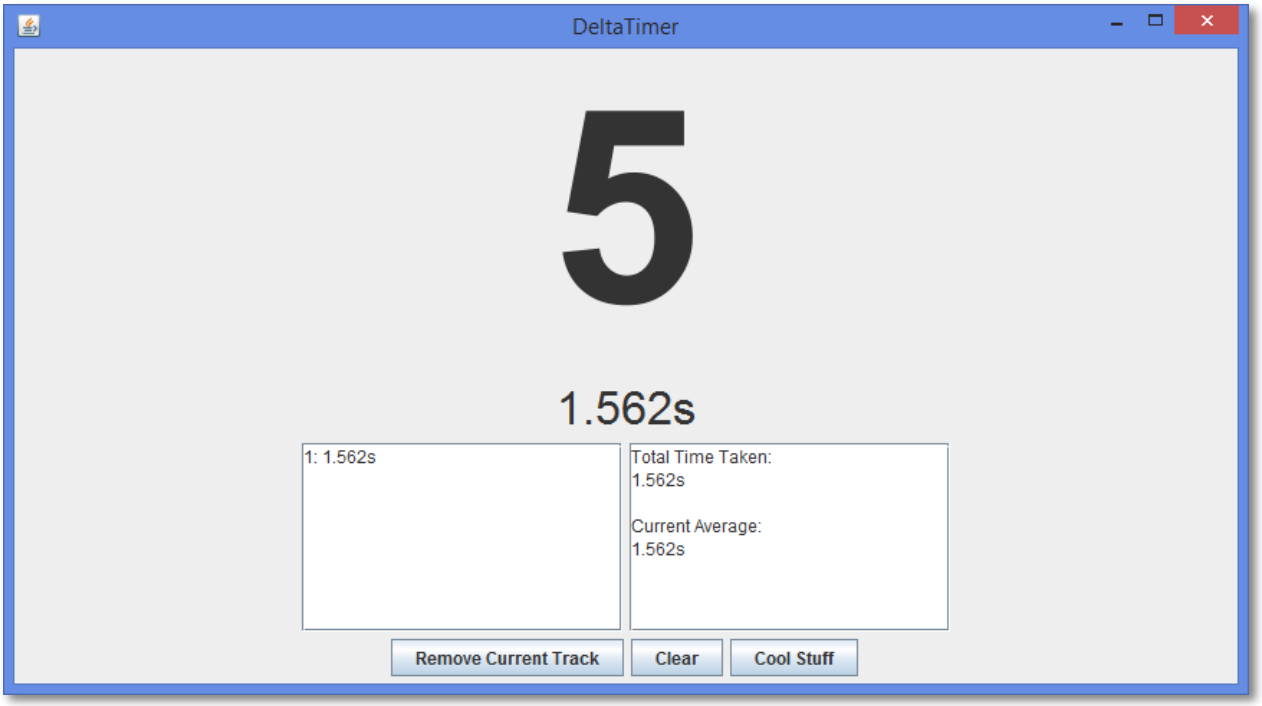
Sections

Section 1. Description

DeltaTimer is an event-driven stopwatch interface.

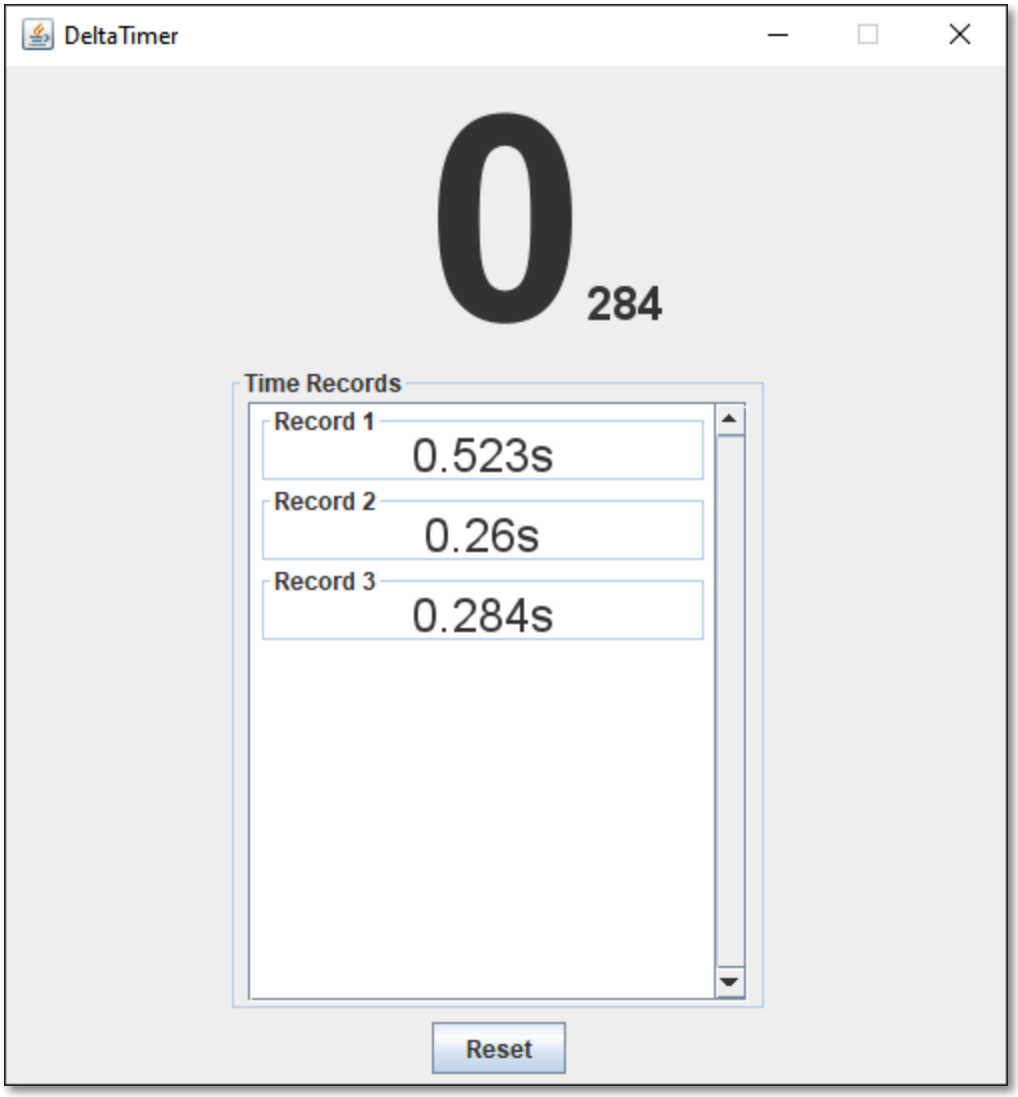
I programmed the very first version of DeltaTimer back in early 2020.



(Appearance of version 1.0)[1]

Later in late 2020[2], I created version 1.01. Version 1.01 was simply an improved GUI update.

[1] The screenshot of the initial interface was taken on Windows 8.1.
[2] Unfortunately, the exact creation date is lost. I can only assume that it was created in December 2020, but I am not certain.



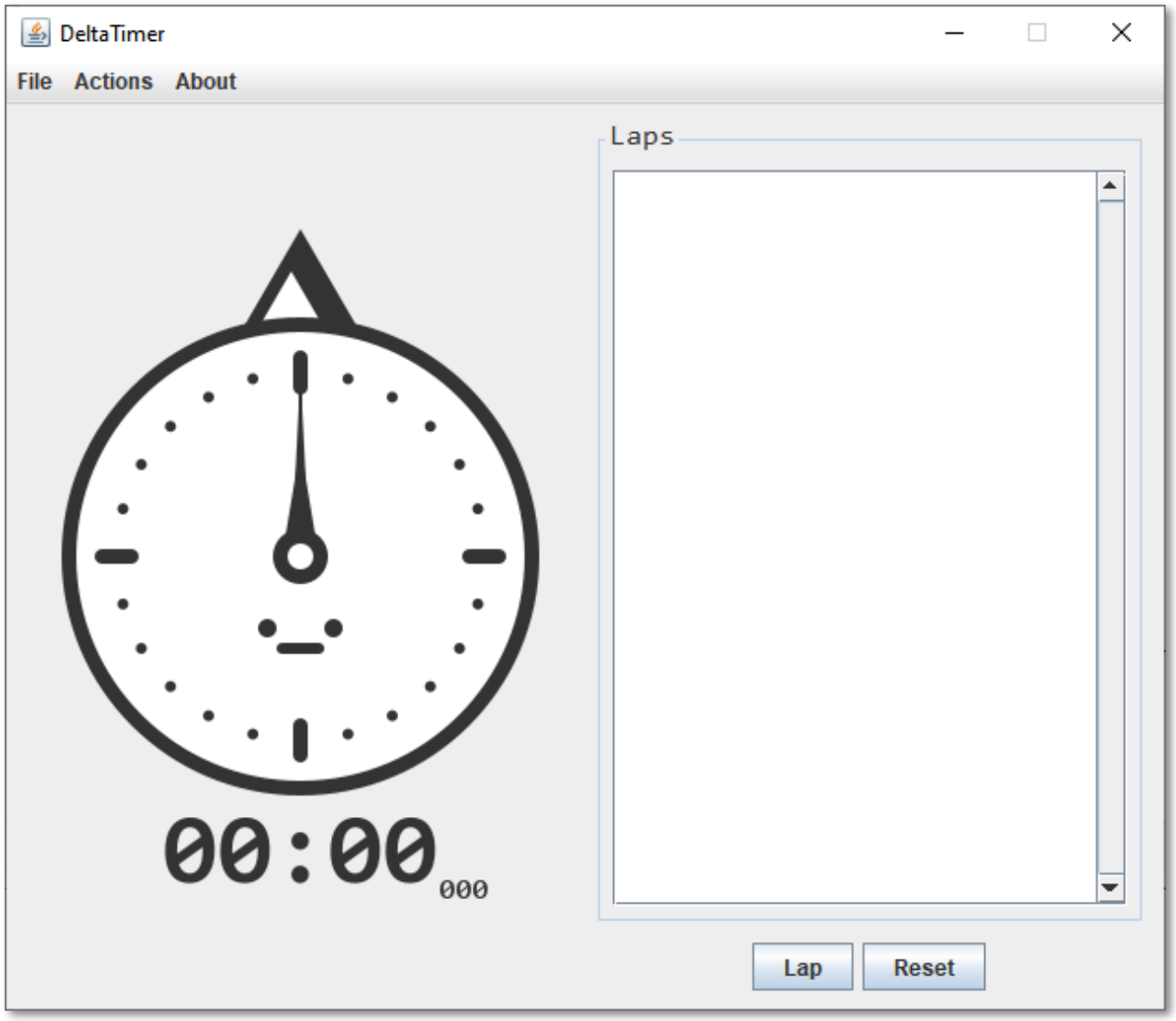
(Appearance of version 1.01)

Version 1.02*(the current version)* provides refactored code, improved GUI appearance, and 2 new features.

The program is written in Java language, and compiled using Java Compiler 15.0.1. Attempts to compile the given source code with a different compiler may result in unexpected or undefined behavior.

Section 2. Features

When the program is launched, an empty frame will be shown.



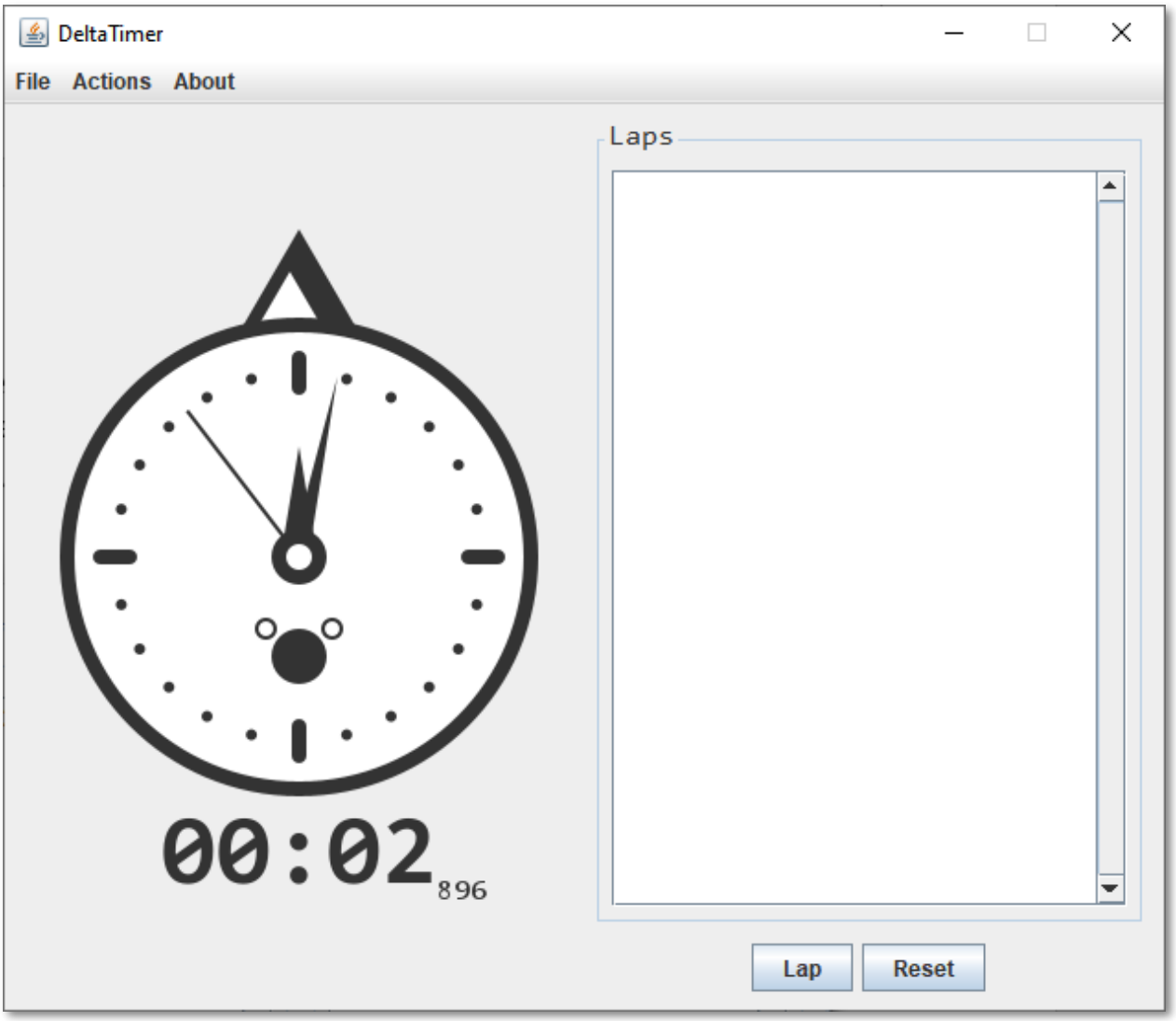
(The initial frame at program launch.)

Starting/Stopping the Stopwatch

To start the stopwatch, press space. To pause the stopwatch, press space again. To reset the stopwatch, click [Reset][3]. The stopwatch changes its face every time it gets

[3] Ctrl-R can be used as a shortcut.

toggled. If the stopwatch is running, it displays a “triggered” face. Otherwise, it displays a neutral face.

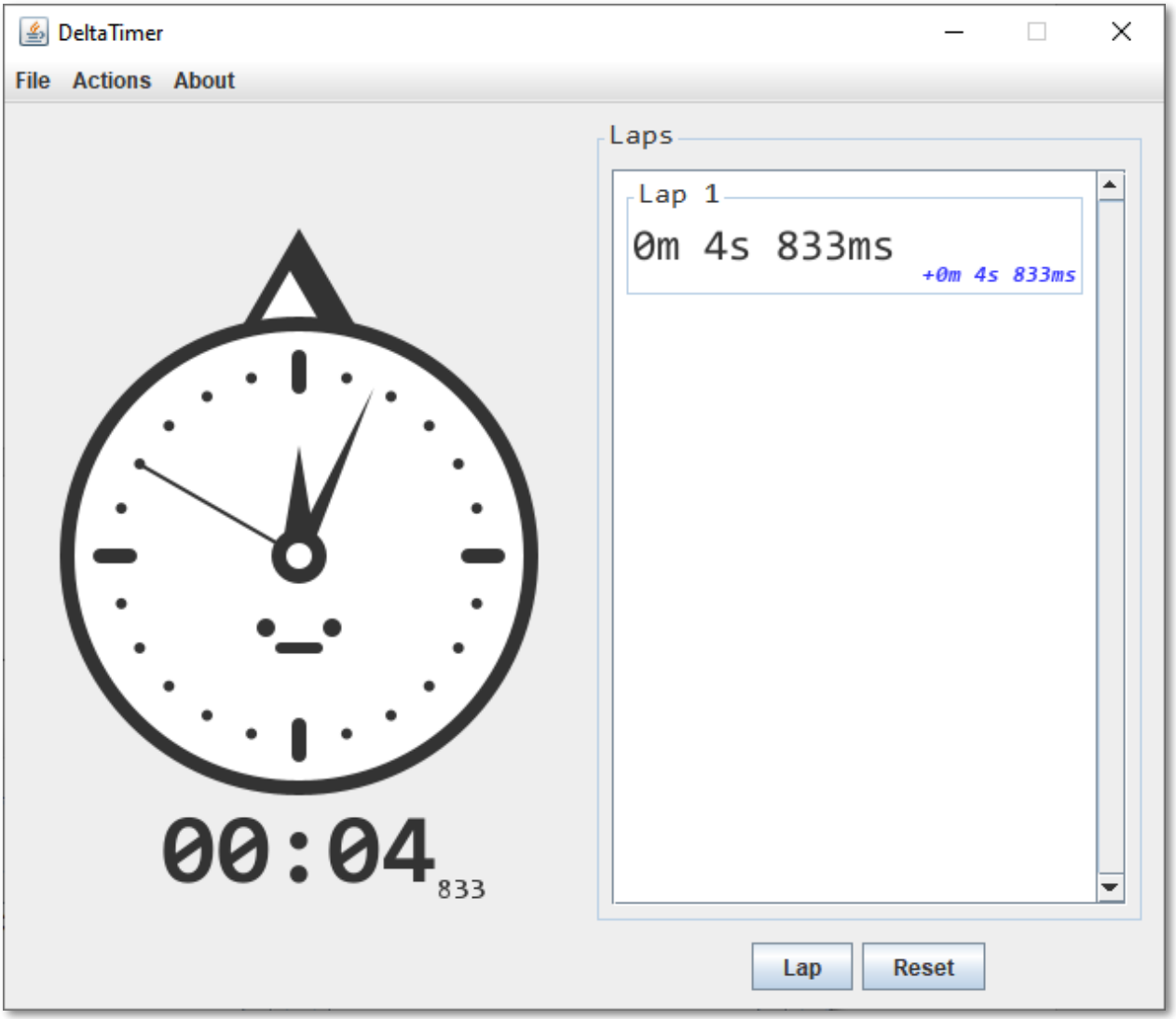


(The “triggered” face.)

Adding Laps

To add a new lap to the stopwatch, click [Lap][4]. A new panel will be visible in [Laps].

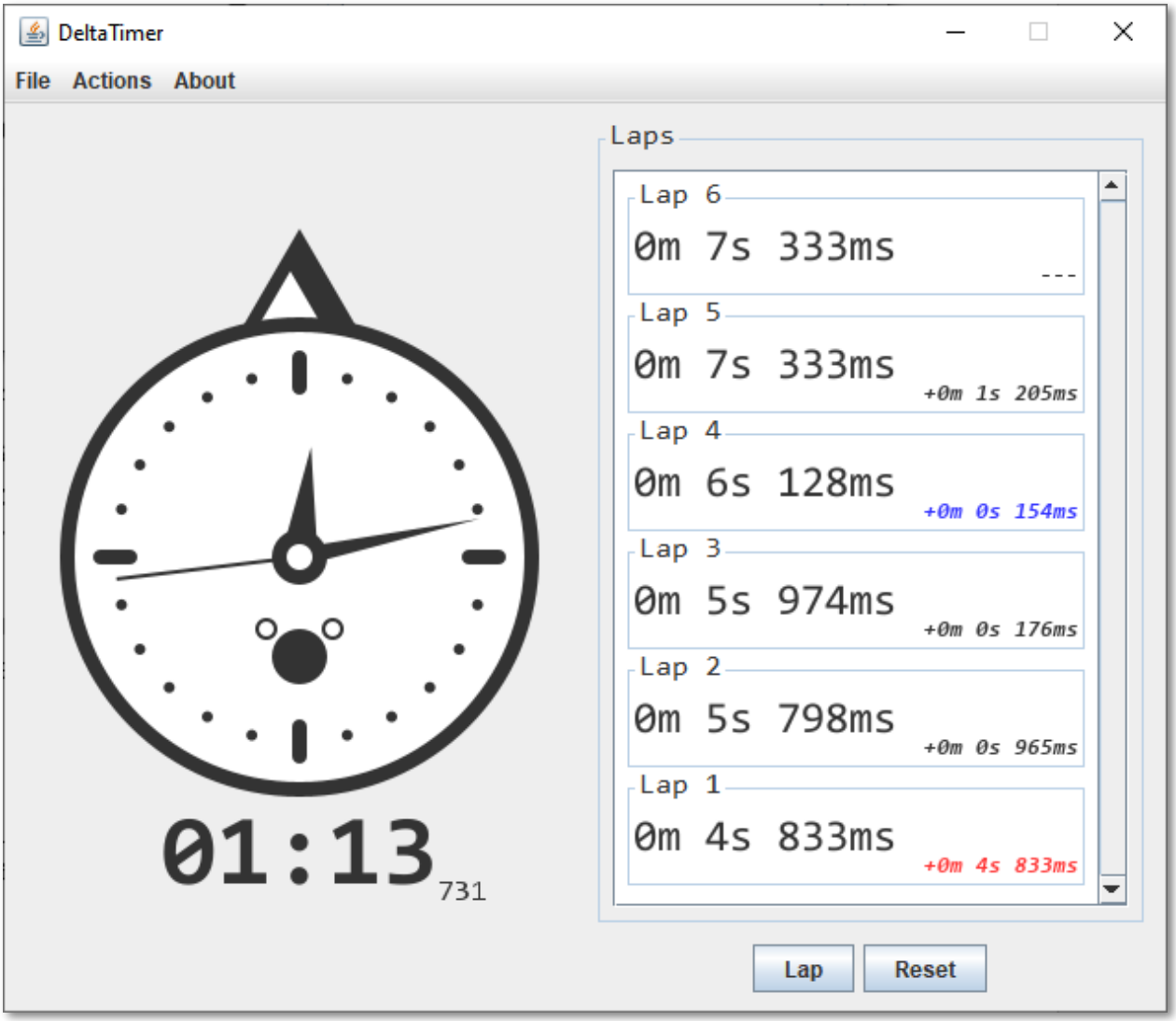
[4] Ctrl-L can be used as a shortcut.



(The frame after clicking [Lap].)

The lap panel displays the lapped time, as well as its difference[5] from the previous lap. When a new lap is added, the program finds the longest and shortest difference between each lap, and renders them with a special color. The longest differences are rendered with red, and the shortest[6] differences are rendered with blue. Other values are rendered with black.

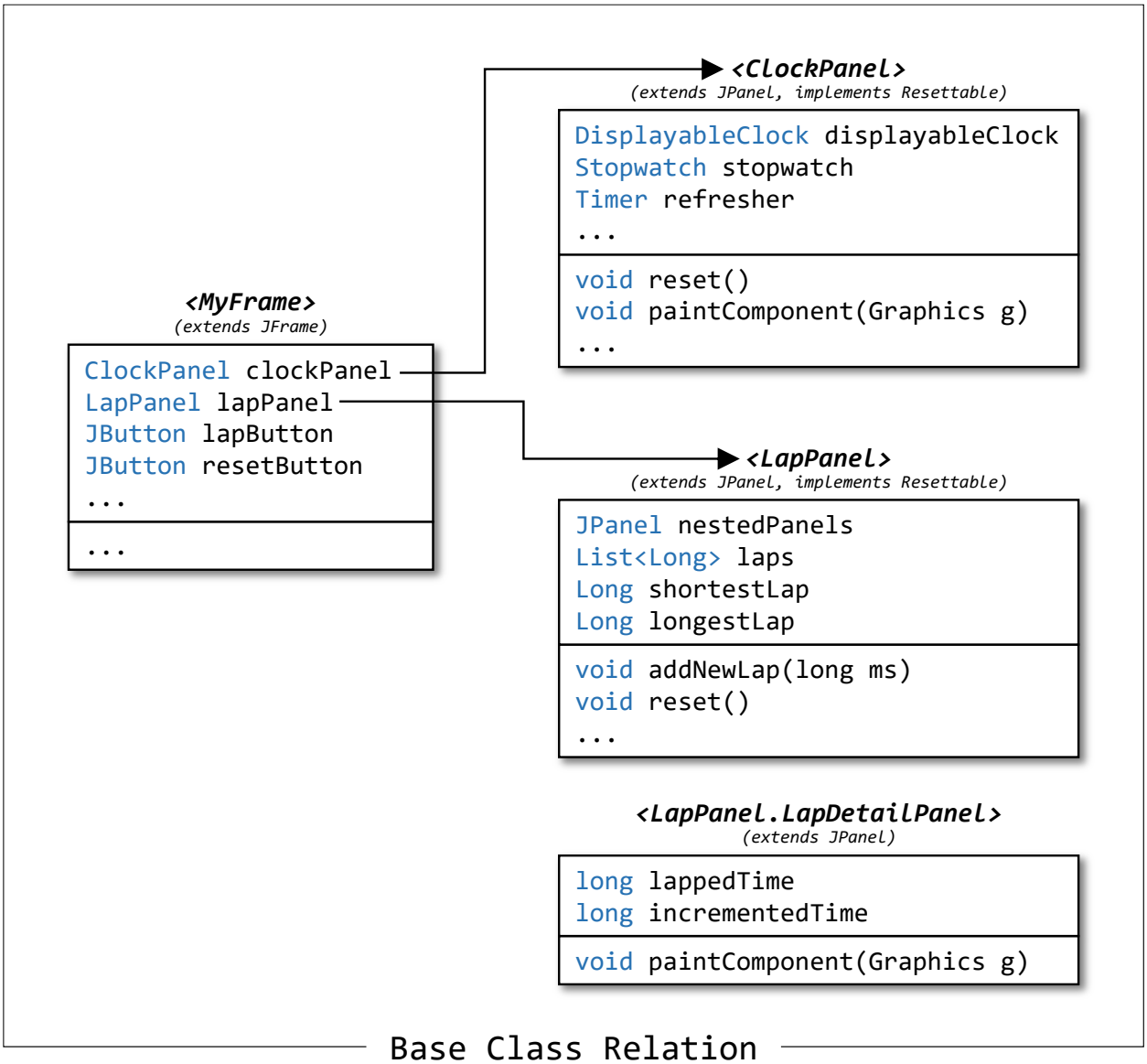
[5] If the difference is 0, the panel displays "---" instead of "+0m 0s 0ms".
[6] When finding the shortest difference, zeros are excluded. Zero difference laps are always rendered with black.



(The frame after adding multiple laps.)

Section 3. Base Class Relation

This section is intended to provide help for any possible future changes I may make. The diagram below illustrates the relation of the base classes.



Base Class Relation

`lapButton` is bound to call `lapPanel.addNewLap(long ms)`. In order to send the `long` argument, it uses `clockPanel.stopwatch`[7].

As for `resetButton`, it is bound to call `clockPanel.reset()` and `lapPanel.reset()`.

[7] Inlcuding the Stopwatch object in ClockPanel is likely not a very good idea. I'm sure there are better ways to design this relation, but this is currently how it's implemented.