

F27SB2 Software Development 2

Tutorial 3

1. Extend the timer program from Tutorials 1 & 3 to:
 - interact with the user through two buttons - the “+” button and the “go” button
 - initially:
 - set the prompt label to “Press + to increment time. Press “go” to start timer.”
 - set the count down label to 0
 - every time the “+” button is selected, increment the value in the count down label
 - when the “go” button is selected, every second decrement the time and display it on the count down label

NB Modifications to Swing `JComponents` inside an `actionPerformed` will not take effect until the `actionPerformed` terminates. This is because event handling code and the code that draws Swing `JComponents` run on the same thread. For now you can solve this problem by using an AWT `Label` rather than a Swing `JLabel` for the count down label. However, can you think of a better solution?

2. Extend the reaction timer from Tutorials 1 & 3 to:
 - interact with the user through two buttons - the “start” button and the “stop” button
 - initially:
 - display the message “Press “start”. Press “stop” when green shows.” in the instruction label
 - set the stop/start label to red
 - when the “start” button is selected, set the time label to blank, pause for a random period of up to 5 seconds, note the time and change the stop/start label to green
 - when the “stop” button is selected, note the time, change the stop/start label to red and display the time taken between the stop/start label changing to green and the “stop” buttons being selected, in the time label.