

Event Handling

If possible, try at least one exercise with separate classes as event handlers, at least one where the main Applet is the event handler, and at least one where you use an inner class for the event handler. My solution set has all three variations for exercise 1.

- 1.** Make an applet whose background color changes from red to blue whenever the user presses the mouse. You can use `setBackground(Color.RED)` and `setBackground(Color.BLUE)` to change the background color, and if you want to toggle back and forth, you can use `getBackground()` to find the current background color. Remember to use `mousePressed`, not `mouseClicked` (`mouseClicked` fires only when the press and release are in the same place, so if you jiggle the mouse too much when clicking, `mouseClicked` does not fire).

You will almost definitely find this easier if you start by copying my circle-drawing example and editing it. Pick either the interface version or the inner-class version, whichever one you prefer.

Also, since the size of the applet doesn't matter too much for the first two examples, you might want to try the Eclipse shortcut of skipping the HTML file and just right-clicking inside the applet and doing "Run As ... Java Applet".

Finally, note that Eclipse can greatly simplify writing the methods needed for an interface. If your code says "public class MyApplet extends Applet implements MouseListener", you can right-click in the code, go to the "Source" submenu, and choose "Override/Implement Methods...". The methods from the interface will be selected automatically and inserted when you press OK. If you use an inner class instead, you can use the same trick, but just interactively choose the methods of interest for Eclipse to insert.

- 2.** Make an applet that prints "a key was hit" whenever the user presses a key on the keyboard. Put the printout in the Java console.
- 3.** Make an applet that is red when the mouse is on the left side of the applet, and blue when the mouse is on the right side.
- 4.** Make an applet that draws a picture of Bill Gates. Switch the picture to Larry Ellison whenever the user clicks the mouse. (Note: call the applet's `repaint()` method to tell it to reinvoke paint).