Chapter 12 Event-Driven Programming

1. A WindowEvent is generated by an instance of the Window class or its subclass. JButton is not a subclass of Window, therefore, it cannot generate the WindowEvent. JButton can generate MouseEvent and ActionEvent.

2. To register a listener object, you invoke the source object's add*X*Listener's method; for example, button.AddActionListener(this). To implement a listener interface, you add implements *X*listener and implement all the handlers in the listener's object.

3. See the Java 2 API documentation on java.awt.AWTEvent.

4. To override a method defined in the listener interface, you provide the code in the body of the method for handling the event. You need to override all the methods defined in the listener interface. If a handler is not used in the program, you can give it an empty body.

5. 1. java.awt.event package should be imported to use ActionEvent and ActionListener in this program;
   `2. java.swing should be javax.swing`
   3. actionPerform should be actionPerformed;
   5. jbtOK is not defined in the actionPerformed method;
   5. listener is not registered with jbtOK.

6. The event type for a mouse movement is MouseMotionEvent. The event type for getting key input is KeyEvent.

7. The listener interface for move pressed, released, clicked, entered, and exited is MouseListener. The listener interface for mouse moved and dragged is MouseMotionListener.

8. keyTyped(KeyEvent e), keyPressed(KeyEvent e), and keyReleased(KeyEvent e)

9. mouseMoved(MouseEvent e) or mouseDragged(MouseEvent e)

10. You create a Timer using the constructor

```
public Timer(int delay, ActionListener listener)
```

Use the start method to start the timer, and the stop method to stop the timer.