

Exercises: Listeners

- 1.** Redo the JSP page that displays the company name. Have it read the company name from a servlet context attribute, and use a listener to set up the attribute. Have the listener also store the current value of the company stock, and display that value in the JSP page.
- 2.** Create a way for an authorized user in the executive role to change the company name.
- 3.** Arrange it so that, whenever the company name changes, the stock value increases by 25%.
- 4.** Make a listener that keeps track of how many sessions are currently active. Make a servlet or JSP page that displays the value.
- 5.** Create an HTML or JSP page that lets the user put Wonka's Wonder Widget in their shopping cart (that's the *only* item your site is selling). Use session tracking to show the user how many of these widgets are in their shopping cart—you don't have to handle the actual purchase, just the tracking of how many items each person has reserved. One wrinkle, though: if there are more than 20 active sessions, don't let **new** users create sessions: return an error message instead. Give users a "log out of session" button to simplify your testing. (Hint: in basic session tracking, you call `request.getSession()`, equivalent to `request.getSession(true)`, where the `true` indicates that the system should make a session if it cannot find a preexisting session for that client. If you call `request.getSession(false)`, the system returns an existing session if it finds it, and returns `null` otherwise.)