object. The AjaxRequest object defines methods that simplify building the query string that is
sent as part of the Ajax request, including accumulating the specified form element values and
even applying the appropriate encoding to the values. The AjaxRequest object also handles
the server's response.

The first line of the updateWeatherForecast function creates an instance of the AjaxRequest
object, passing to its constructor the URL that will handle the Ajax request. The second line is a
call to the AjaxRequest object's addFormElementsById method, passing to it the id attribute of the
ZIP code text box. This method automatically adds the ZIP code entered by the user to the query
string that will be sent to the server. The addFormElementsById method can take any number of
parameters. If there were two form elements whose values should be sent as part of the Ajax
request, instead of calling the addFormElementsById method twice, you could simply call
the method once and supply the two element IDs to the method, separating them with a comma.
The last line of the updateWeatherForecast method instructs the AjaxRequest object to send the
Ajax request to the specified URL.

The UpdateWeatherForecastServlet.java servlet, whose source code is shown in Listing 8-6,
handles the Ajax request for updating the weather forecast. Without getting into the gory details
of accessing the Web service, this servlet simply plucks the desired ZIP code of the
request object and passes it the WeatherForecastService object. This object returns an instance of the
WeatherForecasts object, which encapsulates all the forecast data. The WeatherForecasts object
is attached as an attribute to the request object, and finally the servlet forwards the request and
response to the weatherForecastAjax.jsp file.

Listing 8-6. UpdateWeatherForecastServlet.java

```java
package ajaxdashboard.servlet;

import ajaxdashboard.service.WeatherForecastService;
import java.io.*;
import java.util.Date;
import javax.servlet.*;
import javax.servlet.http.*;

public class UpdateWeatherForecastServlet extends HttpServlet {
    protected void processRequest(HttpServletRequest request,
            HttpServletResponse response)
            throws ServletException, IOException {
        String zipCode = request.getParameter("forecastZipCode");
        WeatherForecastService forecastService = new WeatherForecastService();
        request.setAttribute("forecastData",
                forecastService.getForecastFor(zipCode));

        System.out.println("Weather updated at: " + new Date().toString());
    }
}
```