Practice problems

Why Ajax & Javascript
Web applications that involve Ajax and Javascript have become very common. Consider the following possible reasons and mark which ones are true:

- **YES NO**: Applications involving Ajax and Javascript are much easier to develop and debug than purely server side applications.
- **YES NO**: Applications involving Ajax and Javascript tend to provide faster response to user clicks than purely server side applications.
- **YES NO**: By combining Javascript with XHR calls (Ajax) an application does not need a database any more.

Why Servlets Went Out of Fashion
Nowadays very few programmers write http servlets directly in Java. Consider the following possible reasons and mark which ones are true:

- **YES NO**: Programmers gave up on writing servlets directly because jsp’s run faster usually.
- **YES NO**: Programmers gave up on writing servlets directly because Tomcat 5.0 (and many other recent releases of other application servers) have stopped supporting the kind of http servlets we described in class.
- **YES NO**: Programmers gave up on writing servlets once applet technology became popular.
Writing Clean JSP Code
It is very messy to figure out what the following jsp fragment is doing. It uses the implicit variable out that explicitly writes in the body of the http response the HTML page that is returned to the browser. Rewrite it in the way that a sane jsp programmer would.

<%  
out.write("<HTML>");  
out.write("<HEAD><TITLE>foo</TITLE></HEAD>");  
out.write("<BODY> List of Temperatures:");  
out.write("<UL><LI>La Jolla:" + weather("La Jolla") + "</LI>");  
out.write("<LI>El Cajon:" + weather("El Cajon") + "</LI></UL>");  
out.write("</BODY></HTML>");  
/%%
Session attributes
Consider the following JSP Exam program

<HTML>
<HEAD>
<TITLE>Exam</TITLE>
</HEAD>
<BODY>
<% Integer times = (Integer)(session.getAttribute("times")) ;
   if (times == null) { times = new Integer(0) ; }
   else { times = new Integer(times.intValue() + 1) ;
         session.setAttribute("times", times) ;
   %>
   times = <%= times %>
</BODY>
</HTML>

User A makes the first access to Exam. The page he receives back says \textbf{times=0}. Complete the \texttt{times=___} below, assuming the following events happen in exactly the sequence described.

1. User A makes his second access to Exam from the same browser window. He receives back \texttt{times=___}.
2. User B makes his first access to Exam from another computer. He receives back \texttt{times=___}.
3. User A makes his third access to Exam from yet another computer. He receives back \texttt{times=___}.
**Javascript and AJAX**

Appropriately augment the following HTML page so that as soon as the user has chosen pink pants and green T-shirt an alert pops up with the string “Ridiculous!”

```html
<html>
<head>
...
</head>
<body>
<form method="GET" action="nowhere.com">
  Pants:
  <select name="pants">
    <option value="pink">Pink</option>
    <option value="black">Black</option>
  </select>

  <p>
  T-shirt:
  <select name="shirt">
    <option value="green">Green</option>
    <option value="red">Red</option>
  </select>

</form>
</body>
</html>
```