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Course: 605.782 – Java Web Development JHU

Assignment: HW2

URL: <http://web1.apl.jhu.edu:8080/syvertsj-hw2>

Development Platform:

- Windows 7 (64bit)
- Java 7
- Tomcat 7
- (Servlets 3.0 and JSP 2.2)

Development Tools:

- Eclipse “Indigo”
- Gvim
- Viable plugin
- Git bash

Development and Test Browsers:

- Firefox 10.0.1
- MSIE 7.0
- Chrome 17.0963
- Opera 11.61

Documentation:

- Word Starter 2010
- Word doc to pdf conversion: www.doc2pdf.com

Source Code Resources:

- BrowserInsult.java from “request-headers” project archive.
- ShowRequestHeaders.java from “request-headers” project archive.
- WrongDestination.java from “status-codes” project archive.
- PrimeNumberServlet.java from “response-headers” project archive.

Project Source code:

1. **PartOne.java**
2. **PartTwo.java**
3. **PartThree.java**
4. **part-two.html**
5. **part-three.html**
6. **Index.html**

1. PartOne.java

```
package syvertsj;

// Tomcat7 / Servlets 3.0 / JSP 2.2

import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.*;
import javax.servlet.http.*;
import java.util.*;

/**
 * HW02: Part1
 * Description:
 * Using counter and redirection. First two hits are redirected to
 * google, later ones redirected to yahoo. This gets reset when the
 * server is restarted.
 */

@WebServlet("/part-one")
public class PartOne extends HttpServlet {

    // shared by all instances of servlet:
    static int count = 0;

    @Override
    public void doGet(HttpServletRequest request,
                      HttpServletResponse response)
        throws ServletException, IOException {

        synchronized(this) {
            count++;
            String userAgent = request.getHeader("User-Agent");
            if ( (userAgent != null) && (count < 3) ) {
                response.sendRedirect("http://www.google.com");
            } else {
                response.sendRedirect("http://www.yahooo.com");
            }
        }
    }
}
```

```

}

@Override
public void doPost(HttpServletRequest request,
                   HttpServletResponse response)
    throws ServletException, IOException {
    doGet(request, response);
}
}

```

2. PartTwo.java

```

package syvertsj;

// Tomcat7 / Servlets 3.0 / JSP 2.2

import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.*;
import javax.servlet.http.*;
import java.util.*;

/**
 * HW02: Part2
 * Description:
 * Use HttpServletRequest object to extract the "referer" url from the
 * http header using the "getHeader()" method.
 * The "referer" will be null if the user accesses the url in directly
 * versus via a link.
 */

@WebServlet("/part-two")
public class PartTwo extends HttpServlet {
    @Override
    public void doGet(HttpServletRequest request,
                     HttpServletResponse response)
        throws ServletException, IOException {

        String referer = request.getHeader("referer");
    }
}

```

```

if (referer == null) { // accessed via link
    response.sendRedirect("part-two.html");
} else { // accessed directly
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    String docType =
        "<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 " +
        "Transitional//EN">\n";
    String title = "Blah Software News!";
    docType += "<HTML>\n" +
        "<HEAD><TITLE>" + title + "</TITLE></HEAD>\n" +
        "<BODY BGCOLOR=\"#FDF5E6\">\n" +
        "<H1 ALIGN=CENTER>" + title + "</H1>\n" +
        "<TR BGCOLOR=\"#FFAD00\">\n";
    Enumeration<String> paramNames = request.getParameterNames();
    out.println(docType);
}
}

```

```

@Override
public void doPost(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    doGet(request, response);
}

}

```

3. PartThree.java

```
package syvertsj;

// Tomcat7 / Servlets 3.0 / JSP 2.2

import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.*;
import javax.servlet.http.*;
import java.util.*;

/**
 * HW02: Part3
 * Browser detection: detect IE and warn user
 */

@WebServlet("/part-three")
public class PartThree extends HttpServlet {

    // shared by all instances of servlet:
    static int countTotal = 0;
    static int countIE = 0;

    @Override
    public void doGet(HttpServletRequest request,
                      HttpServletResponse response)
        throws ServletException, IOException {

        synchronized(this) {
            response.setContentType("text/html");
            PrintWriter out = response.getWriter();
            String title, message;

            String userAgent = request.getHeader("user-agent");
            System.out.println(" user-agent: " + userAgent);

            if (userAgent != null) {
                countTotal++;
                if (userAgent.contains("MSIE")) {
                    response.setStatus(503);
                }
            }
        }
    }
}
```

```

        countIE++;
        title = "Pathetic Microsoft Minion";
        message = "IE has crashed! Use Firefox next time!\n" +
            countIE + " foolish people have accessed this website with IE so far.";
        response.sendError(response.getStatus(), message);
    } else {
        if (userAgent.contains("Firefox")) {
            title = "Firefox Browser";
            int status = response.getStatus();
            message = "Status: " + status + " \n";
            message += "You are using Firefox browser.\n" +
                (countTotal - countIE) + " people have accessed this website so far.";
        } else if (userAgent.contains("Chrome")) {
            title = "Chrome Browser";
            int status = response.getStatus();
            message = "Status: " + status + " \n";
            message += "You are using Chrome browser.\n" +
                (countTotal - countIE) + " people have accessed this website so far.";
        } else {
            title = "Non IE Browser";
            int status = response.getStatus();
            message = "Status: " + status + " \n";
            message += "You are using a non IE browser.\n" +
                (countTotal - countIE) + " people have accessed this website so far.";
        }
    }

    String docType =
        "<!DOCTYPE HTML PUBLIC \"/>";
    out.println(docType +
        "<HTML>\n" +
        "<HEAD><TITLE>" + title + "</TITLE></HEAD>\n" +
        "<BODY BGCOLOR=\"#FDF5E6\">\n" +
        "<H1 ALIGN=CENTER>" + title + "</H1>\n" +
        message + "\n" +
        "</BODY></HTML>");
}
}
}
}

```

@Override

```

public void doPost(HttpServletRequest request,
                   HttpServletResponse response)
    throws ServletException, IOException {
    doGet(request, response);
}
}

```

4. part-two.html

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML><HEAD><TITLE>Blah Software Home</TITLE></HEAD>
<BODY BGCOLOR="#FDF5E6">
<H1 ALIGN="CENTER">Blah Software</H1>

<p>Homepage for Blah Software!</p>

<li><a href="part-two">Get the latest information on Blah!</a></li>

</BODY></HTML>

```

5. part-three.html

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML><HEAD><TITLE>Registration Form</TITLE></HEAD>
<BODY BGCOLOR="#FDF5E6">
<H1 ALIGN="CENTER">Registration Form</H1>

<FORM ACTION="part-three" METHOD="POST">
    First Name: <INPUT TYPE="TEXT" NAME="firstName"><BR>
    Last Name: <INPUT TYPE="TEXT" NAME="lastName"><BR>
    Phone Number: <INPUT TYPE="TEXT" NAME="phoneNumber"><BR>
    Shoe Size: <INPUT TYPE="TEXT" NAME="shoeSize"><BR>
    <CENTER><INPUT TYPE="SUBMIT"></CENTER>
</FORM>

</BODY></HTML>

```

6. Index.html

```

<!DOCTYPE html>
<html>
<head><title>HTTP Request/Response Headers and Status Codes</title>
<link rel="stylesheet"

```



```
        href="/css/styles.css"
        type="text/css"/>
</head>
<body>
<table class="title">
  <tr><th>HW2: HTTP Request/Response Headers and Status Codes</th></tr>
</table>
<p>
These apps only run on Tomcat 7 or servers that support servlets 3.0 and
later.
</p>
<fieldset>
<legend>Links</legend>
<ul>
  <li><a href="part-one">part-one</a></li>
  <li><a href="part-two.html">part-two</a></li>
  <li><a href="part-three.html">part-three</a></li>
</ul>
</fieldset>
<p/>

</font>
</body></html>
```