

Computer Science 571 2nd Exam
Prof. Horowitz

Thursday, December 3, 2009, 2:00pm – 3:15pm

Name:

Student ID Number:

- 1. This is a closed book exam.**
- 2. Please answer all questions on the test**

[20 pts] Assignment #6 Perl Questions

Below is a program that handles comparisons.

```
#!/usr/local/bin/perl
# The following "<<" variation of
# data input simplifies CGI forms.
$x = 'operators';
print <<THATSALL;
A common mistake: Confusing the $x =, ==, eq
THATSALL
$x = 7;
if ($x == 7) { print "x is $x\n"; }
if ($x = 5) {
    print "x is now $x,",
        "the assignment is successful.\n";
}
$x = 'stuff';
if ($x eq 'stuff') {
    print "Use eq, ne, lt, gt, etc for strings.\n";
}
```

What 4 lines are printed out?

[2 pts].

[2pts].

[3 pts].

[3 pts].

Below is a program that handles search and replace.

```
#!/usr/local/bin/perl -w
$s = 'There is 1 date 10/25/95 in here somewhere.';
print "\$s=$s\n";
$s =~ /(\d{1,2})\/(\d{1,2})\/(\d{2,4})/;
    print "2: \$1=$1, \$2=$2, \$3=$3, ",
        " \$\$\'=", $`, " \$\$\'=", $', "\n";

    ($mo, $day, $year) =
    ( $s =~ /(\d{1,2})\/(\d{1,2})\/(\d{2,4})/ );
print "3: \$mo=$mo, \$day=$day, \$year=$year.\n";

    ($wholedate, $mo, $day, $year) =
    ( $s =~ /((\d{1,2})\/(\d{1,2})\/(\d{2,4}))/ );
print "4: \$wholedate=$wholedate, \$mo=$mo, ",
    "\$day=$day, \$year=$year.\n";
```

What 4 lines are printed out?

[2 pts].

[2 pts].

[3 pts].

[3 pts].

[20 pts] Assignment #7, Tomcat Questions

[3 pts] Define the acronym JAR and in one sentence give its definition:

[3 pts] Define the acronym WAR and in one sentence give its definition:

[3 pts] How does Tomcat differ from Apache? Cite a major difference, not minor ones.

[3 pts] In what folder of Tomcat does one place Java servlets that are part of a user-developed application?

[3 pts] What is the name of the deployment descriptor file that must be modified to deploy a Java servlet?

[3 pts] Below are 4 possible addresses of Tomcat servers for this class, but only one is correct. Choose the correct one.

- a. <http://csci571.usc.edu:9980/index.jsp>
- b. <http://csci571.usc.edu:80/index.jsp>
- c. <http://www-scf.usc.edu/~csci571/index.jsp>
- d. <http://www-scf.usc.edu/tomcat/index.jsp>

[2 pts] What is the name of the folder where the Tomcat server is configured? And what is the name of the file that must be edited with port settings?

[20 pts] Assignment #8, XSLT Questions

Below is an order written in XML

```
<?xml version = "1.0"?>
<?xml-stylesheet type="text/xsl" href="format.xsl"?>
<Order>
  <TITLE>Sale</TITLE>
  <plant>
    <name>Butterfly bush</name>
    <price>$3.45</price>
    <season>Summer</season>
  </plant>
  <plant>
    <name>Pineapple broom</name>
    <price>$5.00</price>
    <season>Spring</season>
  </plant>
  <plant>
    <name>Peony</name>
    <price>$2.15</price>
    <season>Summer</season>
  </plant>
  <plant>
    <name>Hollyhock</name>
    <price>$2.00</price>
```

```
<season>Summer</season>
</plant>
</Order>
```

Below is the browser output:

Sale

| Name | Season |
|----------------|--------|
| Hollyhock | \$2.00 |
| Peony | \$2.15 |
| Butterfly bush | \$3.45 |

Note: the results are sorted

Below is the start of an XSL stylesheet. Your task is to fill in the missing lines that accept the XML above and produces the output shown above.

```
<?xml version="1.0"?>
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:template match="/">
<html> <body> <center>
```

```
</table></center>
</body> </html>
</xsl:template>
</xsl:stylesheet>
```

[40 pts] Assignment #9, Questions

In the TAs prototype implementation of Assignment #9, below is the code for the routine that calls the Java Servlet. The lines have been numbered for convenience. Answer the questions below.

```
1.function issueServletRequest(form)
2.{
3.    var ck_loc = /^[A-Za-z ]{3,50}),([A-Za-z ]{3,50})$/;
4.    if (!ck_loc.test(form.location.value))
5.    {
6.        alert("Invalid location. Please select location as 'City, State'");
7.    }
8.    {
9.        var url = "ajax_flickr?location=" +
encodeURIComponent(form.location.value) + "&min_upload_date=" +
unix_timestamp();
10.//alert ("You typed: " + encodeURIComponent(form.location.value));
11.    if (typeof XMLHttpRequest != "undefined")
12.    {
13.        req = new XMLHttpRequest();
14.    }
15.    else if (window.ActiveXObject)
16.    {
17.        req = new ActiveXObject("Microsoft.XMLHTTP");
18.    }
19.    req.open("GET", url, true);
20.    req.onreadystatechange = callback1;
21.    req.setRequestHeader("Connection", "Close");
22.    req.setRequestHeader("Method", "GET" + url + "HTTP/1.1");
23.    req.send(null);
24.    }
25.}
```

[3 pts] Explain exactly what is going on in line 3.

[3 pts] Give an example of url that is sent to the Java Servlet.

[3 pts] What is the name of the java servlet?

[3 pts] Which line creates the xmlhttprequest for Firefox?

[3 pts] What condition must occur for the callback1 routine to be executed?

[4 pts] The URL that must be sent to Flickr to get the photos for a given location requires several arguments. Name three of the arguments.

Below is a simple web page that is involved with Assignment #9.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"><body>
<script
src="http://static.ak.connect.facebook.com/js/api_lib/v0.4/XdCommReceiver.js"
type="text/javascript"></script></body></html>
```

[3 pts] What is displayed in the browser?

[3 pts] What does the page accomplish?

[3 pts] What does XdCommReceiver.js do?

The initial page for Assignment #9 has 4 regions, the search button, the large photo area, the small photos area and the upload to Facebook. Using a few lines of HTML for each region, show how each region might be implemented.

[3 pts] Region 1:

[3 pts] Region 2:

[3 pts] Region 3:

[3 pts] Region 4: