Computer Science 571 MidTerm
Prof. Horowitz

Thursday, October 9, 2014, 9:30am – 10:45am

Name: ··   **USC ID:** ···

1. This is a closed book exam.
2. Please answer all questions.
3. Place all answers on the exam and return the entire exam
4. There are 40 questions which are mainly distributed into 4 sections as the following table:

Section	Student Grade	Max
JAVASCRIPT		**/36**
HTTP		**/28**
DOM		**/18**
CGI and PHP		**/18**
		/100

JavaScript Questions #1-#9 [36 Points, 4 points each]

Below are three screenshots, taken one after another, of a web page followed by the JavaScript code that implements the page. Some of the code is missing. Fill in the missing code.
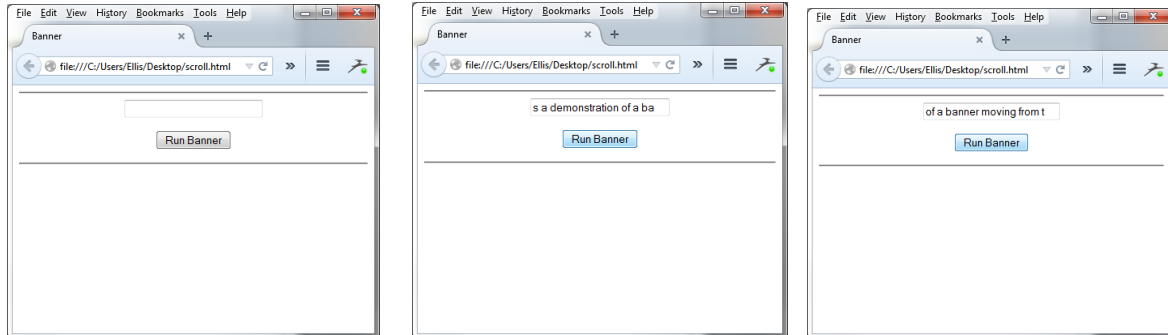

```
<HTML>
<HEAD><TITLE> Banner</TITLE>

<SCRIPT LANGUAGE= "javascript">
var sent = "This is a demonstration of a banner moving from the left to right.";
var slen = sent.length;
var siz = 25;
var a = -3, b = 0;
var subsent = "x";

function makeSub(a,b) {
subsent = sent.substring(a,b) ;
return subsent;
}

function newMake() {
a = a + 3;
b = a + siz;
makeSub(a,b);
return subsent;
}

function doIt() {
for (var ..............................................; ...................................... ; i++) {         1.
setTimeout("document. ................................. = ............... ()", i*300);         2. 3.
setTimeout("window.status = ..................................... ()", i*300);         4.
}
}

</SCRIPT></HEAD>
<BODY >
<HR> <CENTER>
<FORM NAME="z">
<INPUT NAME="textdisplay" TYPE="text" SIZE=25> <P>
<INPUT NAME="doit" Type="button"
```

```
                value = "Run Banner" onClick = "............................................ () ">        5.
</FORM></CENTER>
<HR>
</BODY></HTML>
```

Below is a web page and beneath that is the HTML and JavaScript that generates the page. Some of the code is missing. Fill in the missing code.
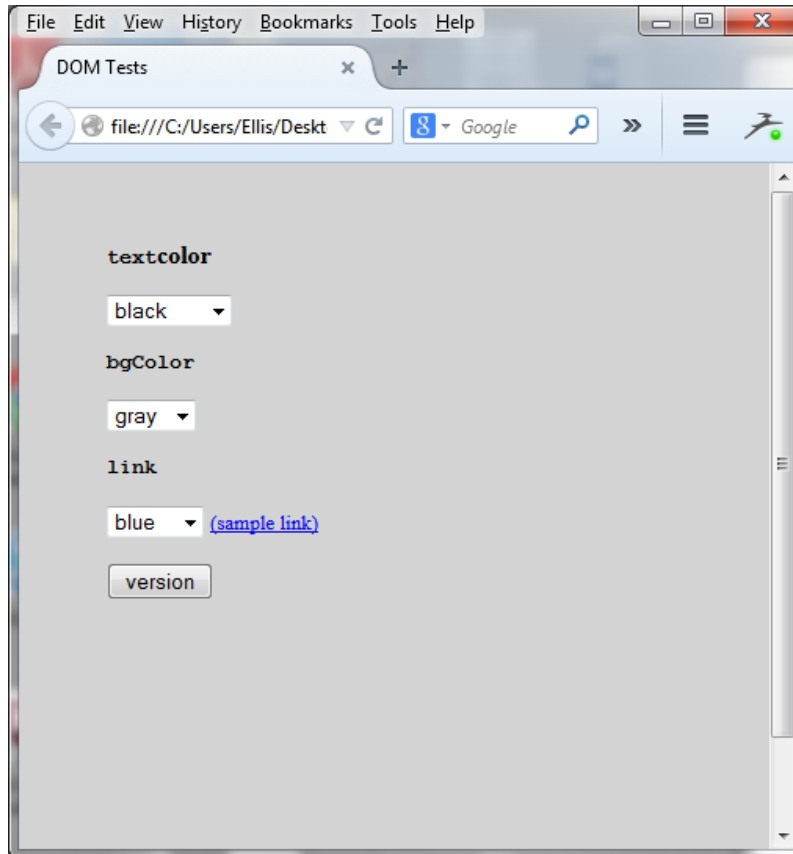

```
1.<html>
2.  <head>
3.    <title>DOM Tests</title>
4.    <script type="application/javascript">
5.    function setBodyAttr(attr,value){
6.    if (document.body) eval('document.body.'+attr+'="'+value+'"');
7.    else notSupported();
8.    }
9.    </script>
10.  </head>
11.  <body>
12.    <div style="margin: .5in; height: 400;">
13.      <p><b><tt>text</tt>color</b></p>
14.      <form>
15.        <select ..........................................="setBodyAttr('text',        6.
16.        this.options[...................................................................].value);">   7.
17.          <option value="black">black
18.          <option value="darkblue">darkblue
```

```
19.            </select>
20.            <p><b><tt>bgColor</tt></b></p>
21.            <select ...............................="setBodyAttr('bgColor',
22.            this.options[................................................].value);">
23.              <option value="white">white
24.              <option value="lightgrey">gray
25.            </select>
26.            <p><b><tt>link</tt></b></p>
27.            <select ...............................="setBodyAttr('link',
28.            this.options[................................................].value);">
29.              <option value="blue">blue
30.              <option value="green">green
31.            </select>  <small>
32.            <a href="http://www.brownhen.com/dom_api_top.html" id="sample">
33.            (sample link)</a></small><br>
34.         </form>
35.         <form>
36.            <input type="button" value="version" onclick="ver()" />
37.         </form>
38.      </div>
39.   </body>
40. </html>
```

8. When the user selects the Gray option for bgcolor what line is executed?

....

9. In line 5, what are the arguments of attr and value based on the function call specified in the above question?

....

HTTP Questions #10-#16 [28 Points, 4 points each]

Below is an actual httpd.conf file. Answer the questions that follow.

```
#
ServerType standalone
ServerRoot "/etc/httpd"
PidFile /var/run/httpd.pid
ResourceConfig /dev/null
AccessConfig /dev/null
Timeout 300
KeepAlive On
MaxKeepAliveRequests 0
KeepAliveTimeout 15
MinSpareServers 16
MaxSpareServers 64
StartServers 16
MaxClients 512
MaxRequestsPerChild 100000
```

```
Port 80

<IfDefine SSL>
Listen 80
Listen 443
</IfDefine>

User www
Group www
ServerAdmin admin@openna.com
ServerName www.openna.com
DocumentRoot "/home/httpd/ona"

<Directory />
Options None
AllowOverride None
Order deny,allow
Deny from all
</Directory>

<Directory "/home/httpd/ona">
Options None
AllowOverride None
Order allow,deny
Allow from all
</Directory>

<Files .pl>
Options None
AllowOverride None
Order deny,allow
Deny from all
</Files>

<IfModule mod_dir.c>
DirectoryIndex index.htm index.html index.php index.php3 default.html
</IfModule>

#<IfModule mod_include.c>
#Include conf/mmap.conf
#</IfModule>

<IfModule mod_mime.c>
TypesConfig /etc/httpd/conf/mime.types
</IfModule>

DefaultType text/plain
HostnameLookups Off

ErrorLog /var/log/httpd/error_log
LogLevel warn
LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-
Agent}i\"" combined
SetEnvIf Request_URI \.gif$ gif-image
CustomLog /var/log/httpd/access_log combined env=!gif-image
ServerSignature Off
```

```
<IfModule mod_alias.c>
ScriptAlias /cgi-bin/  "/home/httpd/cgi-bin/"
<Directory "/home/httpd/cgi-bin">
AllowOverride None
Options None
Order allow,deny
Allow from all
</Directory>
</IfModuleGT;

<IfModule mod_mime.c>
AddEncoding x-compress Z
AddEncoding x-gzip gz tgz

AddType application/x-tar .tgz
</IfModule>

ErrorDocument 500 "The server made a boo boo.
ErrorDocument 404 http://192.168.1.1/error.htm
ErrorDocument 403 "Access Forbidden -- Go away.

<IfModule mod_setenvif.c>
BrowserMatch "Mozilla/2" nokeepalive
BrowserMatch "MSIE 4\.0b2;" nokeepalive downgrade-1.0 force-response-
1.0
BrowserMatch "RealPlayer 4\.0" force-response-1.0
BrowserMatch "Java/1\.0" force-response-1.0
BrowserMatch "JDK/1\.0" force-response-1.0
</IfModule>

#
<IfDefine SSL>
AddType application/x-x509-ca-cert .crt
AddType application/x-pkcs7-crl    .crl
</IfDefine>

<IfModule mod_ssl.c>
SSLPassPhraseDialog     builtin
SSLSessionCache         dbm:/var/run/ssl_scache
SSLSessionCacheTimeout  300

SSLLog     /var/log/httpd/ssl_engine_log
SSLLogLevel warn
</IfModule>

<IfDefine SSL>
<VirtualHost _default_:443>

DocumentRoot "/home/httpd/ona"
ServerName www.openna.com
ServerAdmin admin@openna.com
ErrorLog /var/log/httpd/error_log

</VirtualHost>
</IfDefine>
```

```
10. What is the root directory of the server?
```

....

```
11. What is the root directory for web pages?
```

....

```
12. What is the URL of the home page?
```

....

```
13. What is the name of the home page?
```

....

```
14. What is the location of the error file?
```

....

```
15. If a web page is not found by the server, what page is returned?
```

....

```
16. What is the purpose of the first line of the file?
```

....

DOM QUESTIONS #17-#22 [18 Points]

In XML DOM, there are a dozen different node types, e.g. ELEMENT_NODE is one. Mention three others.

```
17. [1 pt]
```
....

```
18. [1 pt]
```
....

```
19. [1 pt]
```
....

20. [5 pts] Below is the HTML for the 'Execute' button:

```
<button id="first">Execute</button>
```

Write some JavaScript code that finds the button and then sets the element's .onclick property to a function that sets the button's style.background property to '#ff8'

....

....

....

....

21. [5 pts] Below is the HTML for the 'Execute' button:

```
<button id="w3c">Execute</button>
```

Write some JavaScript code below that uses addEventListener to turn the button's style.background property to '#ff8' when it is clicked. Then add a second, separate click handler that calls: alert('Hello')

....

....

....

....

22. [5 pts] Below is part of a web page containing a table with 100 stars, each star created from the gif file star_off.gif. The web page has already downloaded the file star_on.gif. Answer the question below.

Here is a table containing 100 stars:	This is the HTML for the table to the left:
☆ ☆	`<table id="star_table">` `<tr>` `<td><img src="star_off.gif"><td>` `<td><img src="star_off.gif"><td>` `<td><img src="star_off.gif"><td>` ... `<tr>` `</tr>` `<td><img src="star_off.gif"><td>` `<td><img src="star_off.gif"><td>` `<td><img src="star_off.gif"><td>` ... `<tr>` ... `</table>`

Create a single event handle that causes the stars to turn 'on' (i.e., star_on.gif) whenever the mouse is over the star.

....

....

....

....

....

....

CGI and PHP Questions #23-#40 [18 Points]

Below are two screenshots of a web page, an initial screenshot, then after some fields have been filled in. A third screenshot shows the output after the submit button is clicked. Below is the PHP code that was used. Eighteen lines have some missing code. Each line is worth one point. Provide the missing code.

Hello, Sam Pade.
You are Male, and you like Steak
Pizza
To be or not to be, that is the question
You're favorite time is Morning, and you passed College!

```php
<?php
        // if page is not submitted to itself echo the form
        if (!isset(……………………………………………………………….)) {                                    23.
?>
<html>
<head>
<title>Personal INFO</title>
</head>
<body style='background-color: #8FD8D8'>
<!—The form is submitted to itself-->
<form method="post" action="<?php echo $_SERVER['……………………………………………………….'];?>">          24.
        First Name:<input type="text" size="12" maxlength="12" name="Fname"><br />

        Last Name:<input type="text" size="12" maxlength="36" name="Lname"><br />

        Gender:<br />
        Male:<input type   ="……………………………………." value="Male" name="gender"><br />          25.
        Female:<input type="……………………………………." value="Female" name="gender"><br />

        Please choose your favourite foods:<br />
        Steak:<input type="checkbox" value="Steak" name="food[]"><br />
        Pizza:<input type="checkbox" value="Pizza" name="food[]"><br />
        Chicken:<input type="checkbox" value="Chicken" name="food[]"><br />

        <textarea rows="5" cols="20" name="quote" wrap="physical">
        Enter your favorite quote!</textarea><br />

        Select a Level of Education:<br />
        <select name="education">
        <option value="Jr.High">Jr.High</option>
        <option value="HighSchool">HighSchool</option>
        <option value="College">College</option></select><br />

        Select your favourite time of day:<br />
        <select name="TofD" size="3">
        <option value="Morning">Morning</option>
        <option value="Day">Day</option>
        <option value="Night">Night</option></select><br />
```

```php
        <input type="submit" value="submit" name="submit">
</form>
<?php
}
```
.... 26.
```php
{
        //Extract information of the submitted form fileds
        $Fname      = .................................................................................................;  27.
        $Lname      =.................................................................................................;   28.
        $gender     =.................................................................................................;   29.
        $food       =.................................................................................................;   30.
        $quote      = .................................................................................................;  31.
        $education  = .................................................................................................;  32.
        $TofD       = .................................................................................................;  33.

        echo "<body style='background-color: #8FD8D8'>";
        echo .................................................................................................;          34.
        echo .................................................................................................;          35.
        //print the list of selected foods
        ................................ (................................ as ................................) {          36.
                echo .................................................................................;                 37.
        }
        echo .................................................................................................;          38.
        echo .................................................................................................;          39.
        echo "</body>";
}
```
.... 40.