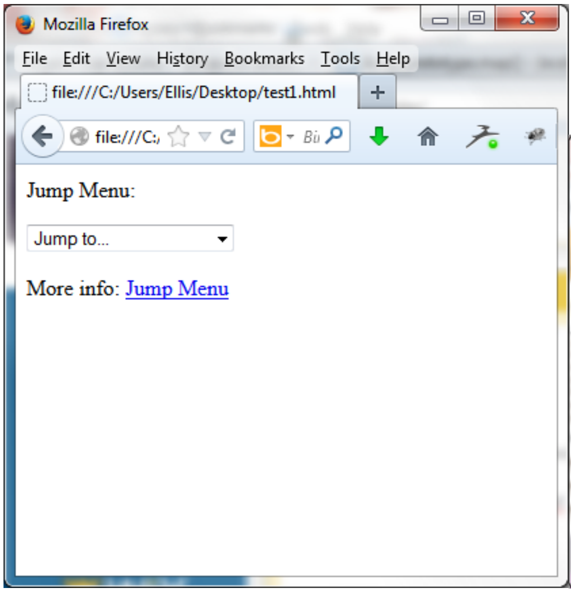
Computer Science 571 Exam #1
Prof. Papa
Tuesday, October 2, 2018, 5:30pm – 6:50pm

Sessions: SAL 101 [a-m] and THH 201 [n-z]

Name: **Id Number:** **USC Email:**

1. This is a closed book exam.
2. Please answer all questions.
3. Place all answers on the exam and return the entire exam

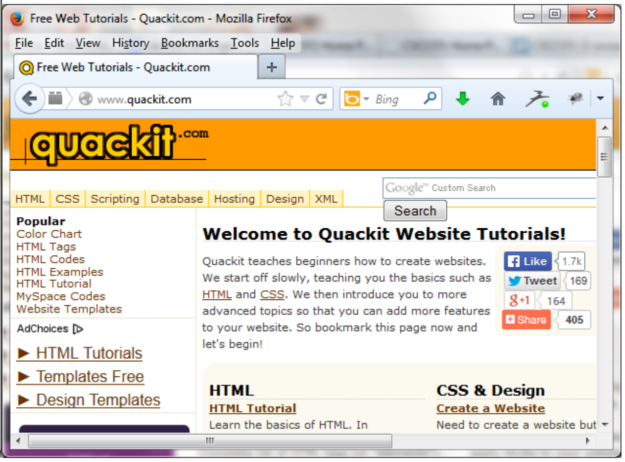
JAVASCRIPT QUESTIONS [30 POINTS]


Mozilla Firefox
File Edit View History Bookmarks Tools Help
file:///C:/Users/Ellis/Desktop/test1.html
file:///C:

Jump Menu:

Jump to...

More info: Jump Menu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File Edit View History Bookmarks Tools Help
Free Web Tutorials - Quackit.com
www.quackit.com
Bing
quackit.com
HTML CSS Scripting Database Hosting Design XML
Google™ Custom Search
Search
Like 1.7k
Tweet 169
+1 164
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HTML Tutorial
Learn the basics of HTML. In

CSS & Design
Create a Website
Need to create a website but

[10 pts] Above to the left is a screenshot of the web page produced by the source code below and to the right is a new page containing the web page that results when the first selection is chosen. Fill in the missing code below.

```
<script language="javascript" type="text/javascript" >
function jumpto(x){
       window.open(x, '_blank');
}

</script>
<p>Jump Menu:</p>
<form name="form1">
<select name="jumpmenu"
```

```
onChange=
"jumpto(document.form1.jumpmenu.options[document.form1.jumpmenu.options.selec
tedIndex].value)">

<option>Jump to...</option>

<option value=http://www.quackit.com>Quackit Homepage</option>
  <option value=http://www.quackit.com/javascript/>JavaScript</option>
  <option value=http://www.quackit.com/html/>HTML</option>
  <option value=http://www.quackit.com/css/>CSS</option>
  <option value=http://www.quackit.com/sql/tutorial/>SQL</option>
  <option value=http://www.quackit.com/database/tutorial/>Database
Tutorial</option>
  <option value=http://www.quackit.com/web_hosting/>Web Hosting
Tutorial</option>
</select>
</form>
<div class="more-info"> <p>More info: <a
href="/javascript/javascript_dropdown_menu.cfm">Jump Menu</a></p>
</div>
```

[5 pts] What are the values of x(6) and y(7)?

```
function makeAdder(a) {
    return function(b) {
    return a+b;
  };
}

x = makeAdder(5);
y = makeAdder(20);
```

`x(6) ?` **`[2 1⁄2 pts]`**

`y(7) ?` **`[2 1⁄2 pts]`**

Answer: X(6) returns 11 and y(7) returns 27; makeAdder(5) returns an anonymous function which adds 5 to the function argument; makeAdder(20) returns an anonymous function which adds 20 to the function argument;

The regular expression below includes three sets of parentheses (...). In the following questions, explain the purpose of the patterns contained in each of the parentheses.

var pattern = "^(\w+)@([a-zA-Z_]+)\.([a-zA-Z]{2,3})$";

Answer:

[5 pts] What is the purpose of the pattern within the first set of parentheses: (\w+)

Answer: One or more alphanumeric characters

[5 pts] What is the purpose of the pattern within the second set of parentheses:

([a-zA-Z_]+)

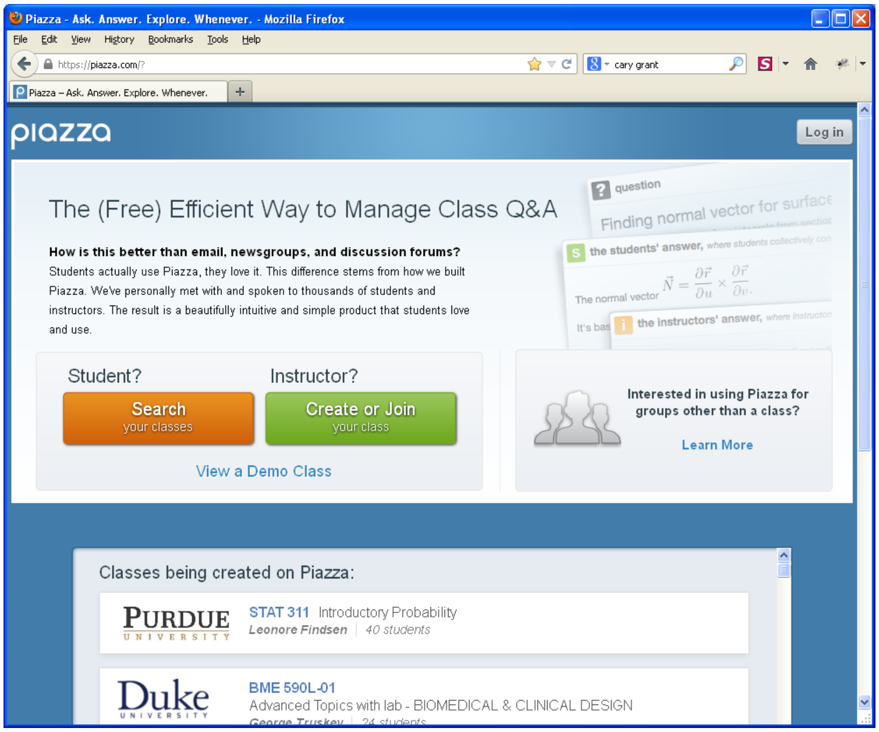
Answer: one or more alphabetic upper/lower case or underscore

[5 pts] What is the purpose of the pattern within the third set of parentheses:

([a-zA-Z]{2,3})

Answer: two or three alphabetic characters

HTTP QUESTIONS [20 POINTS]


Piazza - Ask. Answer. Explore. Whenever. - Mozilla Firefox
File Edit View History Bookmarks Tools Help
https://piazza.com/?
cary grant
Piazza – Ask. Answer. Explore. Whenever.
piazza
Log in
question
Finding normal vector for surface
the students' answer, where students collectively con
The normal vector
$\vec{N} = \frac{\partial \vec{r}}{\partial u} \times \frac{\partial \vec{r}}{\partial v}.$
It's bas
the instructors' answer, where instructor
Student?
Search
your classes
Instructor?
Create or Join
your class
View a Demo Class
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PURDUE UNIVERSITY
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Classes being created on Piazza:

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Leonore Findsen | 40 students

BME 590L-01
Advanced Topics with lab - BIOMEDICAL & CLINICAL DESIGN
George Truskey | 24 students

The picture above is a snapshot of the Piazza home page. Below, are the HTTP headers exchanged between the browser and Bing. The transactions have been edited, leaving only a few of the transactions.

```
-----------------------------------------------------------Transaction 1
```

```
http://ocsp.godaddy.com/
POST / HTTP/1.1
Host: ocsp.godaddy.com
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Content-Length: 106
Content-Type: application/ocsp-request
Connection: keep-alive


HTTP/1.1 200 OK
Date: Fri, 22 Feb 2013 18:24:27 GMT
Server: Apache
content-transfer-encoding: Binary
Cache-Control: max-age=12905, public, no-transform, must-revalidate
Last-Modified: Fri, 22 Feb 2013 16:10:52 GMT
Expires: Fri, 22 Feb 2013 22:10:52 GMT
Etag: "2e38ac3a0ac40d876bb7ba482005e6c68ceb96a9"
p3p: CP="IDC DSP COR LAW CUR ADM DEV TAI PSA PSD IVA IVD HIS OUR SAM PUB LEG UNI COM
NAV STA"
Content-Length: 1923
Connection: close
Content-Type: application/ocsp-response
----------------------------------------------------------Transaction 2
https://www.piazza.com/

GET / HTTP/1.1
Host: www.piazza.com
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Cookie: piazza_session=EGyCDvHvKwuwCyLDEDGGtxGyFuHDEFGx.0;
__utma=231435806.1547084154.1357668061.1361132434.1361506957.15;
__utmz=231435806.1357668061.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none);
__utmv=231435806.|2=user_type=instructor=1
Connection: keep-alive

HTTP/1.1 302 Found
Server: nginx/1.2.1.1431
Date: Fri, 22 Feb 2013 18:24:27 GMT
Content-Type: text/html; charset=utf-8
Content-Length: 86
Connection: close
Status: 302
X-Powered-By: Phusion Passenger (mod_rails/mod_rack) 3.0.7
Set-Cookie: piazza_session=EGyCDvHvKwuwCyLDEDGGtxGyFuHDEFGx.0; path=/; expires=Thu, 22
Aug 2013 18:24:27 GMT; HttpOnly
X-Runtime: 0
Location: https://piazza.com/?
Cache-Control: no-cache
----------------------------------------------------------Transaction 3
https://piazza.com/?

GET /? HTTP/1.1
Host: piazza.com
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
```

```
Cookie: __utma=231435806.1547084154.1357668061.1361132434.1361506957.15;
__utmz=231435806.1357668061.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none);
last_piaz_user=gr81dafcQqZ; __utmv=231435806.|2=user_type=instructor=1
Connection: keep-alive
If-None-Match: "2549c6767dbab8e1f80868d7e90d7c02"

HTTP/1.1 200 OK
Server: nginx/1.2.1.1431
Date: Fri, 22 Feb 2013 18:24:27 GMT
Content-Type: text/html; charset=utf-8
Transfer-Encoding: chunked
Connection: close
Vary: Accept-Encoding
Status: 200
X-Powered-By: Phusion Passenger (mod_rails/mod_rack) 3.0.7
Set-Cookie:
piazza_session=HuyLKtGCDIIFLxvutxKxttyGJLvttLvy.5%26x%26%26%7C%22%21r%7Cw5M5Trab_rf%2C
V%2CV%5E5%3F5%275MD0; path=/; expires=Thu, 22 Aug 2013 18:24:27 GMT; HttpOnly
X-Runtime: 96
p3p: CP='IDC DSP CURa ADMa DEVa OUR ONL UNI COM NAV'
Etag: "5f45fe0637dfbc9241d25b51926dd804"
Cache-Control: private, max-age=0, must-revalidate
Content-Encoding: gzip
----------------------------------------------------------Transaction 4
https://piazza.com/css/splash/style.css?v=5202

GET /css/splash/style.css?v=5202 HTTP/1.1
Host: piazza.com
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: text/css,*/*;q=0.1
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Cookie: __utma=231435806.1547084154.1357668061.1361132434.1361506957.15;
__utmz=231435806.1357668061.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none);
last_piaz_user=gr81dafcQqZ; __utmv=231435806.|2=user_type=instructor=1;
piazza_session=HuyLKtGCDIIFLxvutxKxttyGJLvttLvy.5%26x%26%26%7C%22%21r%7Cw5M5Trab_rf%2C
V%2CV%5E5%3F5%275MD0
Connection: keep-alive

HTTP/1.1 200 OK
Server: nginx/1.2.1.1431
Date: Fri, 22 Feb 2013 18:24:28 GMT
Content-Type: text/css
Transfer-Encoding: chunked
Connection: close
Last-Modified: Tue, 19 Feb 2013 03:31:35 GMT
Vary: Accept-Encoding
Expires: Mon, 25 Mar 2013 18:24:28 GMT
Cache-Control: max-age=2678400
Content-Encoding: gzip
----------------------------------------------------------Transaction 5
https://connect.facebook.net/en_US/all.js

GET /en_US/all.js HTTP/1.1
Host: connect.facebook.net
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: */*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: keep-alive
If-None-Match: "094376e05ec9a60405bad2f7c3718bf0"

HTTP/1.1 304 Not Modified
```

```
Content-Type: application/x-javascript; charset=utf-8
Etag: "094376e05ec9a60405bad2f7c3718bf0"
Cache-Control: public, max-age=124
Expires: Fri, 22 Feb 2013 18:26:32 GMT
Date: Fri, 22 Feb 2013 18:24:28 GMT
Connection: keep-alive
----------------------------------------------------------Transaction 6
https://piazza.com/javascripts/sliding-panel.js?v=5202

GET /javascripts/sliding-panel.js?v=5202 HTTP/1.1
Host: piazza.com
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: */*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Cookie: __utma=231435806.1547084154.1357668061.1361132434.1361506957.15;
__utmz=231435806.1357668061.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none);
last_piaz_user=gr81dafcQqZ; __utmv=231435806.|2=user_type=instructor=1;
piazza_session=HuyLKtGCDIIFLxvutxKxttyGJLvttLvy.5%26x%26%26%7C%22%21r%7Cw5M5Trab_rf%2C
V%2CV%5E5%3F5%275MD0
Connection: keep-alive

HTTP/1.1 200 OK
Server: nginx/1.2.1.1431
Date: Fri, 22 Feb 2013 18:24:28 GMT
Content-Type: application/x-javascript
Transfer-Encoding: chunked
Connection: close
Last-Modified: Thu, 29 Nov 2012 09:02:40 GMT
Vary: Accept-Encoding
Expires: Mon, 25 Mar 2013 18:24:28 GMT
Cache-Control: max-age=2678400
Content-Encoding: gzip
----------------------------------------------------------Transaction 7
https://piazza.com/js/splash/splash.js?v=5202

GET /js/splash/splash.js?v=5202 HTTP/1.1
Host: piazza.com
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: */*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Cookie: __utma=231435806.1547084154.1357668061.1361132434.1361506957.15;
__utmz=231435806.1357668061.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none);
last_piaz_user=gr81dafcQqZ; __utmv=231435806.|2=user_type=instructor=1;
piazza_session=HuyLKtGCDIIFLxvutxKxttyGJLvttLvy.5%26x%26%26%7C%22%21r%7Cw5M5Trab_rf%2C
V%2CV%5E5%3F5%275MD0
Connection: keep-alive

HTTP/1.1 200 OK
Server: nginx/1.2.1.1431
Date: Fri, 22 Feb 2013 18:24:28 GMT
Content-Type: application/x-javascript
Transfer-Encoding: chunked
Connection: close
Last-Modified: Thu, 17 Jan 2013 20:43:36 GMT
Vary: Accept-Encoding
Expires: Mon, 25 Mar 2013 18:24:28 GMT
Cache-Control: max-age=2678400
Content-Encoding: gzip
----------------------------------------------------------Transaction 8
https://piazza.com/piazzza_js/ajax.js?v=5202
```

```
GET /piazzza_js/ajax.js?v=5202 HTTP/1.1
Host: piazza.com
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: */*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Cookie: __utma=231435806.1547084154.1357668061.1361132434.1361506957.15;
__utmz=231435806.1357668061.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none);
last_piaz_user=gr81dafcQqZ; __utmv=231435806.|2=user_type=instructor=1;
piazza_session=HuyLKtGCDIIFLxvutxKxttyGJLvttLvy.5%26x%26%26%7C%22%21r%7Cw5M5Trab_rf%2C
V%2CV%5E5%3F5%275MD0
Connection: keep-alive

HTTP/1.1 200 OK
Server: nginx/1.2.1.1431
Date: Fri, 22 Feb 2013 18:24:28 GMT
Content-Type: application/x-javascript
Transfer-Encoding: chunked
Connection: close
Last-Modified: Thu, 07 Feb 2013 08:37:42 GMT
Vary: Accept-Encoding
Expires: Mon, 25 Mar 2013 18:24:28 GMT
Cache-Control: max-age=2678400
Content-Encoding: gzip
----------------------------------------------------------Transaction 9
https://ssl.google-
analytics.com/__utm.gif?utmwv=5.3.9&utms=1&utmn=1800083830&utmhn=piazza.com&utme=8(2!u
ser_type)9(2!instructor)11(2!1)&utmcs=UTF-8&utmsr=1920x1080&utmvp=1006x754&utmsc=24-
bit&utmul=en-
us&utmje=1&utmfl=11.5%20r502&utmdt=Piazza%20%E2%80%93%20Ask.%20Answer.%20Explore.%20Wh
enever.&utmhid=381092738&utmr=-&utmp=%2F&utmac=UA-21514163-
1&utmcc=__utma%3D231435806.1547084154.1357668061.1361506957.1361557560.16%3B%2B__utmz%
3D231435806.1357668061.1.1.utmcsr%3D(direct)%7Cutmccn%3D(direct)%7Cutmcmd%3D(none)%3B&
utmu=q~

GET
/__utm.gif?utmwv=5.3.9&utms=1&utmn=1800083830&utmhn=piazza.com&utme=8(2!user_type)9(2!
instructor)11(2!1)&utmcs=UTF-8&utmsr=1920x1080&utmvp=1006x754&utmsc=24-bit&utmul=en-
us&utmje=1&utmfl=11.5%20r502&utmdt=Piazza%20%E2%80%93%20Ask.%20Answer.%20Explore.%20Wh
enever.&utmhid=381092738&utmr=-&utmp=%2F&utmac=UA-21514163-
1&utmcc=__utma%3D231435806.1547084154.1357668061.1361506957.1361557560.16%3B%2B__utmz%
3D231435806.1357668061.1.1.utmcsr%3D(direct)%7Cutmccn%3D(direct)%7Cutmcmd%3D(none)%3B&
utmu=q~ HTTP/1.1
Host: ssl.google-analytics.com
User-Agent: Mozilla/5.0 (Windows NT 5.1; rv:19.0) Gecko/20100101 Firefox/19.0
Accept: image/png,image/*;q=0.8,*/*;q=0.5
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: keep-alive

HTTP/1.1 200 OK
Age: 87787
Cache-Control: private, no-cache, no-cache=Set-Cookie, proxy-revalidate
Content-Length: 35
Content-Type: image/gif
Date: Thu, 21 Feb 2013 18:01:53 GMT
Expires: Wed, 19 Apr 2000 11:43:00 GMT
Last-Modified: Wed, 21 Jan 2004 19:51:30 GMT
Pragma: no-cache
Server: GFE/2.0
X-Content-Type-Options: nosniff
X-Firefox-Spdy: 3
----------------------------------------------------------
```

Each of the following questions is worth 2 points. There is no partial credit allowed.

Q1: How many web servers are involved in these HTTP transactions and what are their complete names?

A1: Apache, nginx/1.2.1.1431, GFE/2.0

Q2: What is the name and version of the browser used in these transactions?

A2: Firefox version 19.0.

Q3: What kind of MIME content types are accepted by the browser?

A3: text/html, application/xhtml+xml, application/xml, text/css, */* (any MIME type)

Q4: Are any transactions returning compressed data? If so, which ones?

A4: All transactions returning the header "Content-Encoding: gzip"): transactions 3, 4, 6, 7, and 8.

Q5: Transaction 2 request includes the "Location" header. What is that used for?

A5: To "redirect" the browser to a new page at https://piazza.com/?

Q6: What data is returned by the browser in transaction 5 and why?

A6: No data is returned (304 Not Modified) because the cached file is "fresh"

Q7: In transaction 5 request the header "If-None-Match" is present. What is the header value asking to match?

A7: The Etag of the file "all.js"

Q8: Name 4 headers used in these transactions for cache control.

A8: Any 4 of "Cache-Control", "Last-Modified", "Expires", "Etag", "If-None-Match", "Date", "Vary", "Pragma".

Q9: Are any transactions using HTTP/2 or SPDY?

A9: Yes, transaction 9, given the response header “X-Firefox-Spdy: 3”

Q10: What type(s) of files are transmitted in “compressed” format?

A10: HTML (transaction 3, text/html, gzip), CSS (transaction 4, text/css, gzip), JavaScript (transaction 6, 7 and 8, application-x-javascript, gzip),

DOM QUESTIONS [20 POINTS]

The following set of examples makes use of this XML file (books.xml):

```
<bookstore>
<book category="cooking">
<title lang="en">Everyday Italian</title>
<author>Giada De Laurentiis</author>
<year>2005</year>
<price>30.00</price>
</book>
<book category="children">
<title lang="en">Harry Potter</title>
<author>J K. Rowling</author>
<year>2005</year>
<price>29.99</price>
</book>
<book category="web">
<title lang="en">XQuery Kick Start</title>
<author>James McGovern</author>
<author>Per Bothner</author>
<author>Kurt Cagle</author>
<author>James Linn</author>
<author>Vaidyanathan Nagarajan</author>
<year>2003</year>
<price>49.99</price>
</book>
<book category="web" cover="paperback">
<title lang="en">Learning XML</title>
<author>Erik T. Ray</author>
<year>2003</year>
<price>39.95</price>
</book>
</bookstore>
```

You will be asked to fill some missing lines. Each missing line is worth 2 points. There is no partial credit.

To start the examples we need a way of downloading the XML file. This is done using the function loadXMLDoc that follows, stored in the file `loadxmldoc.js`. Fill in the missing code:

```
function loadXMLDoc(dname)
{
if (window.XMLHttpRequest)
{ xhttp= new XMLHttpRequest(); } 1.
else
{ xhttp=new ActiveXObject("Microsoft.XMLHTTP"); }
xhttp.open("GET",dname,false);
xhttp.send();
return xhttp.responseXML;
}
```

Example 1: Read the code, look at the output and then provide the missing code

```
<!DOCTYPE html><html><head>
<script src="loadxmldoc.js" > 2.
</script></head>
<body><script>
xmlDoc=loadXMLDoc("books.xml");
document.write("Number of book nodes: ");
document.write(xmlDoc.getElementsByTagName('book').length);
     3.
document.write("<br>");
//Remove the first book
y=xmlDoc.getElementsByTagName("book")[0];
xmlDoc.documentElement.removeChild(y);                        4.
document.write("Number of book nodes after removing the first
book: ");
document.write(xmlDoc.getElementsByTagName('book').length); 5.
</script></body></html>
```

Output

```
Number of book nodes: 4
Number of book nodes after removing the first book: 3
```

Example 2: Read the code, look at the output and then provide the missing code

```
<!DOCTYPE html><html><head>
<script src="loadxmldoc.js"> </script>
```

```
</head><body><script>
xmlDoc=loadXMLDoc("books.xml");
x=xmlDoc.getElementsByTagName('book');

document.write("Book 1 - category:  " +
x[0].getAttribute('category'));                          6.
document.write("<br>");
document.write(“Removing category attribute of the first book”);
x[0].removeAttribute('category');                        7.
document.write("Book 1 - category:  " +
x[0].getAttribute('category'));
</script></body></html>
```

Output

```
Book 1 – category: cooking
Removing category attribute of the first book
Book 1 – category: null
```

Example 3: Read the code, look at the output and then provide the missing code

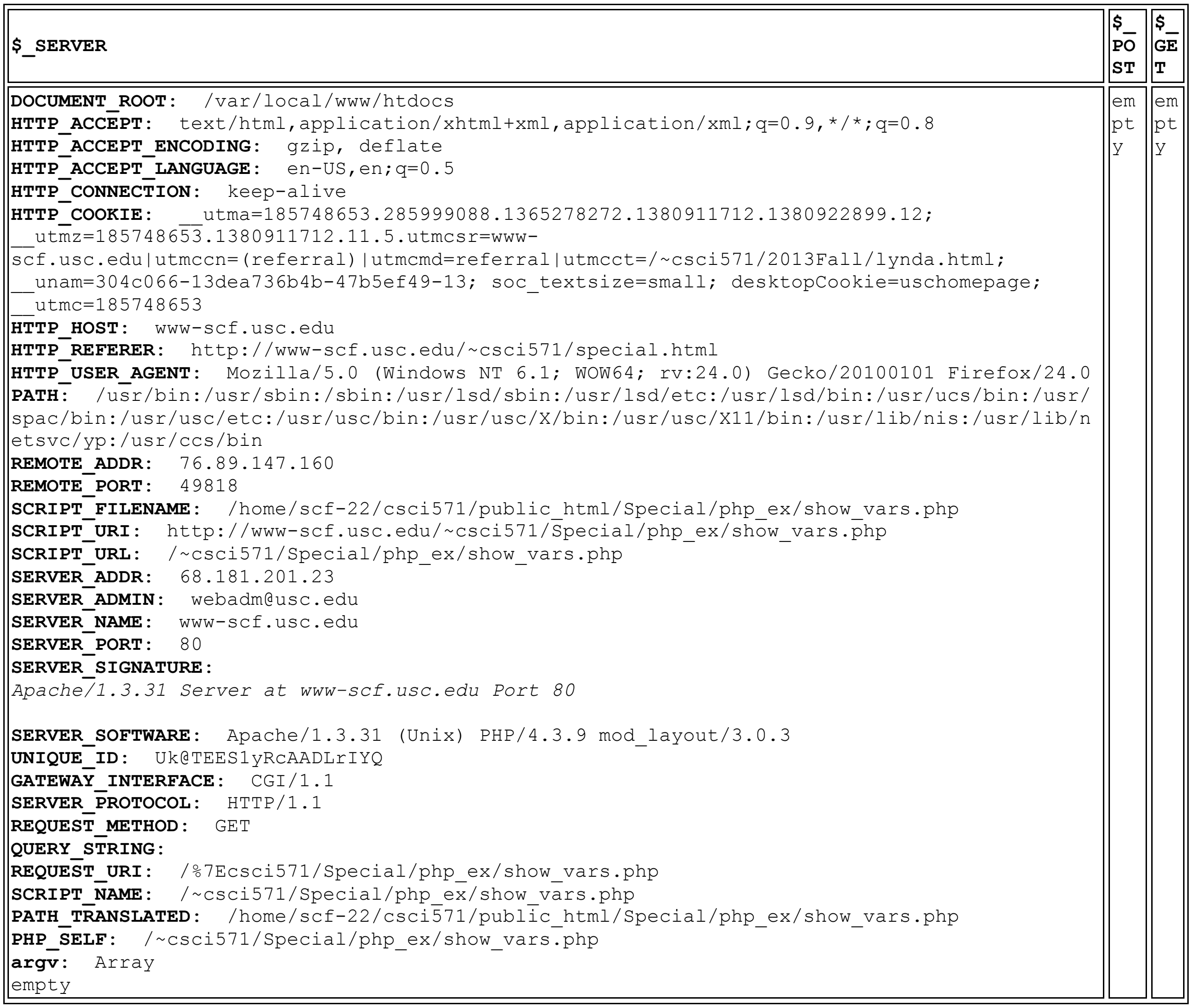
```
<!DOCTYPE html>
<html>
<body>

<p id="demo"></p>

<script>
var x, i, xmlDoc;
var txt = "";
var text = "<book>" +
"<title>Everyday Italian</title>" +
"<author>Giada De Laurentiis</author>" +
"<year>2005</year>" +
"</book>";

parser = new DOMParser();
xmlDoc = parser.parseFromString(text,"text/xml");

// documentElement always represents the root node
x = xmlDoc.documentElement.childNodes; 8.
for (i = 0; i < x.length ;i++) {
  txt += x[i].nodeName + ": " + x[i].childNodes[0].nodeValue +
"<br>"; 9.
}
document.getElementById("demo").innerHTML = txt; 10.
</script>
```

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

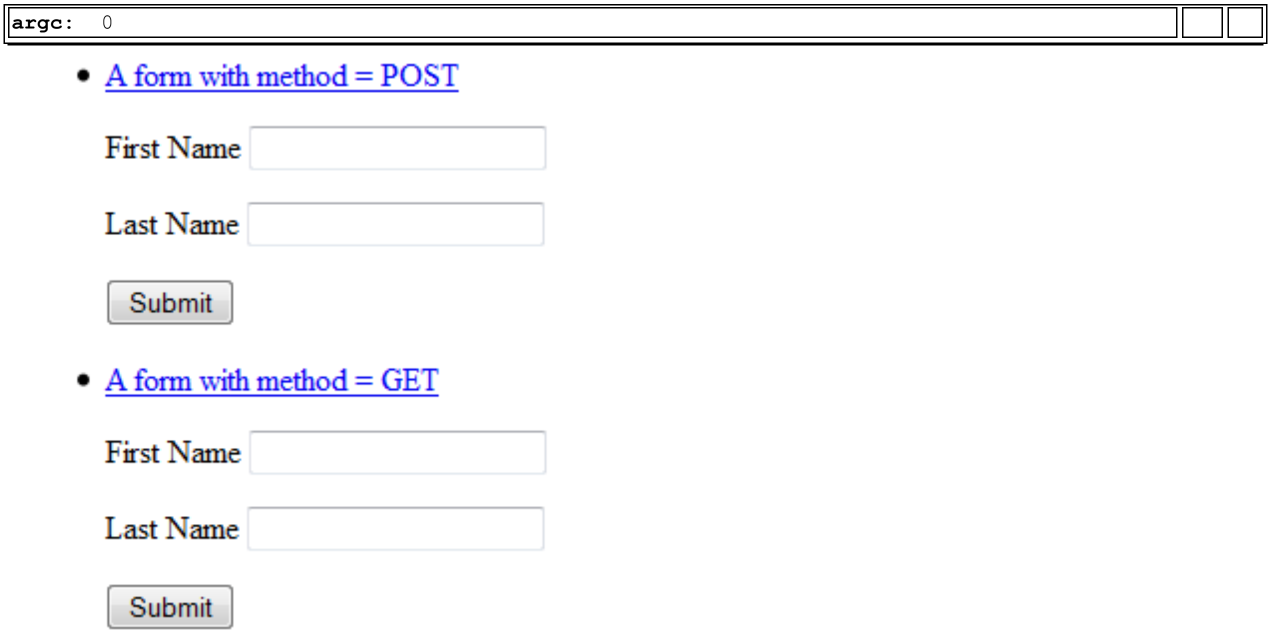
Output
title: Everyday Italian
author: Giada De Laurentiis
year: 2005

PHP QUESTIONS [10 POINTS]

[5 pts] Below is one example of the output of the program `show_vars.php`, a program that prints the PHP environment variables and the POST and GET name=value pairs. Following the output is the actual PHP source code, with some of the code removed. Please provide the missing code.



$_SERVER	**$_POST**	**$_GET**
DOCUMENT_ROOT: /var/local/www/htdocs **HTTP_ACCEPT**: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8 **HTTP_ACCEPT_ENCODING**: gzip, deflate **HTTP_ACCEPT_LANGUAGE**: en-US,en;q=0.5 **HTTP_CONNECTION**: keep-alive **HTTP_COOKIE**: __utma=185748653.285999088.1365278272.1380911712.1380922899.12; __utmz=185748653.1380911712.11.5.utmcsr=www-scf.usc.edu|utmccn=(referral)|utmcmd=referral|utmcct=/~csci571/2013Fall/lynda.html; __unam=304c066-13dea736b4b-47b5ef49-13; soc_textsize=small; desktopCookie=uschomepage; __utmc=185748653 **HTTP_HOST**: www-scf.usc.edu **HTTP_REFERER**: http://www-scf.usc.edu/~csci571/special.html **HTTP_USER_AGENT**: Mozilla/5.0 (Windows NT 6.1; WOW64; rv:24.0) Gecko/20100101 Firefox/24.0 **PATH**: /usr/bin:/usr/sbin:/sbin:/usr/lsd/sbin:/usr/lsd/etc:/usr/lsd/bin:/usr/ucs/bin:/usr/spac/bin:/usr/usc/etc:/usr/usc/bin:/usr/usc/X/bin:/usr/usc/X11/bin:/usr/lib/nis:/usr/lib/netsvc/yp:/usr/ccs/bin **REMOTE_ADDR**: 76.89.147.160 **REMOTE_PORT**: 49818 **SCRIPT_FILENAME**: /home/scf-22/csci571/public_html/Special/php_ex/show_vars.php **SCRIPT_URI**: http://www-scf.usc.edu/~csci571/Special/php_ex/show_vars.php **SCRIPT_URL**: /~csci571/Special/php_ex/show_vars.php **SERVER_ADDR**: 68.181.201.23 **SERVER_ADMIN**: webadm@usc.edu **SERVER_NAME**: www-scf.usc.edu **SERVER_PORT**: 80 **SERVER_SIGNATURE**: *Apache/1.3.31 Server at www-scf.usc.edu Port 80* **SERVER_SOFTWARE**: Apache/1.3.31 (Unix) PHP/4.3.9 mod_layout/3.0.3 **UNIQUE_ID**: Uk@TEES1yRcAADLrIYQ **GATEWAY_INTERFACE**: CGI/1.1 **SERVER_PROTOCOL**: HTTP/1.1 **REQUEST_METHOD**: GET **QUERY_STRING**: **REQUEST_URI**: /%7Ecsci571/Special/php_ex/show_vars.php **SCRIPT_NAME**: /~csci571/Special/php_ex/show_vars.php **PATH_TRANSLATED**: /home/scf-22/csci571/public_html/Special/php_ex/show_vars.php **PHP_SELF**: /~csci571/Special/php_ex/show_vars.php **argv**: Array empty	empty	empty



argc: 0		

- A form with method = POST

First Name

Last Name

Submit

- A form with method = GET

First Name

Last Name

Submit

Source code for show_vars.php

```
<!doctype html><html>
<head><title>Show $_SERVER, $_POST, $_GET
Variables</title></head>
<style type="text/css">
th {   text-align:left;}
</style>
<body>
<?php
        function print_tabs($tabs) {
                for($i = 0; $i < $tabs; $i++) {                1.
                        echo "&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;";
                }
        }
        function print_array($arr, $tabs = 0) {
                if(!empty($arr)) {
                        foreach($arr as $k=> $v) {
                                print_tabs($tabs);
                                echo $k . ":" . $v . "<br/>";   2.
                                if(is_array($v)) {
                                        print_array($v, $tabs+1);
                                }
                        }
                } else { echo "empty";          }
        }
?>
<table border='1'>
```

```
<tr><th width="33%">$_SERVER</th><th width="34%">$_POST</th><th
width="33%">$_GET</th></tr>
      <tr>
<td valign="top">  <?php print_array($_SERVER); ?>  </td> 3.           3.
<td valign="top">  <?php print_array($_POST); ?>    </td> 4.
<td valign="top">  <?php print_array($_GET); ?>     </td> 5.           5.
      </tr>  </table>
<ul>
      <li><a href="?fname=Hello&lname=World">A form with method
= POST</a>
      <div>
      <form method="POST" action="">
      <p>
       <label for="fname">First Name</label>
       <input type="text" value="" name="fname">
      </p>
      <p>
       <label for="lname">Last Name</label>
       <input type="text" value="" name="lname">
      </p>
      <p><input type="submit" value="Submit" name="submit"></p>
</form>      </div></li>
      <li><a href="?fname=Hello&lname=World">A form with method
= GET</a>
      <div>
      <form method="GET" action="">
      <p>
      <label for="fname">First Name</label>
      <input type="text" value="" name="fname">
      </p>
      <p>
      <label for="lname">Last Name</label>
      <input type="text" value="" name="lname">
</p><p><input type="submit" value="Submit" name="submit"></p>
</form>      </div></li></ul>
</body></html>
```

[5 points] Consider the following program and complete the output that is produced.

```
<!DOCTYPE html>
<html>
<body>

<?php
```

```
$a=array("a"=>"red","b"=>"green");
array_push($a,"blue","yellow");
print_r($a);
?>

</body>
</html>
```

Output:

Array (**[a] => red [b] => green [0] => blue [1] => yellow**)

JAVASCRIPT REGULAR EXPRESSIONS QUESTIONS [10 POINTS]

Q1. [5 points] Describe in one sentence what does the pattern checks for a match:

```
var pattern = /(^-*\d+$)|(^-*\d+\.\d+$)/
```

A1. Either zero or more minus signs, followed by one or more digits, or zero or more minus signs followed by one or more digits, followed by a dot (.), and followed by one or more additional digits.

Q2. [5 points] Describe in one sentence what does the pattern checks for a match:

```
var pattern = /^[0-9]{3}[\-]?[0-9]{2}[\-]?[0-9]{4}$/;
```

A2. Anchored at the beginning and at the end the pattern matches: 3 digits, an optional hyphen, two digits, an optional hyphen, followed by 4 digits; in effect a Social Security Number.

CSS QUESTIONS [10 POINTS]

Below are lines extracted from some CSS style sheet. For each line answer the question. Each question is worth 2 points.

Q1. Give an HTML example usage of the declaration below:

```
#sh_rdiv a {position:relative;
float:left; display:block;
text-decoration:none; cursor:default; outline:none}
```

A1.

```
<div ID="sh_rdiv">
          <a href="http://www.hello.com">My link</a>
</div>
```

href value can be any URL or "local" html page name
"My link" value can be any string.

Q2. What does this declaration do?

```
.hpVpv_Tile_home_theme a,.hpVpv_TilePanel {
background-color:#0072bc; border-color:#fff; color:#fff;
font-family:Segoe UI Light,SegoeUI,Tahoma,Arial,Verdana,sans-serif}
```

A2. Changes the background-color, border color, foreground color, and font-family of a class named hpVpv_TilePanel and the A (Anchor) tag INSIDE any tag with class name hpVpv_Tile_home_theme

Q3. Give two (2) HTML examples of usage of the declaration from Q2:

A3.

```
<div class="hpVpv_TilePanel"> </div>

<div class="hpVpv_Tile_home_theme">
     <a href="http://www.hell.com">My link</a>some text
</div>
```

Q4. Write in the CSS to create a "class" named hidden **that changes the CSS properties** display **to none,** height **to 0,** width **to 0 and** overflow **to hidden.**

A4.

```
.hidden {display:none; height:0; width:0; overflow:hidden}
```

Q5. Give an HTML example usage of the declaration below:

```
span { display: block }
```

A5.

```
<span>A display property with a value of "block" results
in</span> a line break between the two elements
```