# CS571 Fall 2023: Web Technologies Exam 2 - Results ✕

**Attempt 1 of 1**

Written Nov 30, 2023 5:00 PM - Nov 30, 2023 5:21 PM

Released Dec 1, 2023 8:00 AM

Attempt Score  **87.41 / 100 - 87.41 %**

Overall Grade (Highest Attempt)  **87.41 / 100 - 87.41 %**

## High-Performance Websites Questions

### Question 1                                                1.2 / 2 points

The Performance Golden Rule is that 80%-90% is spent on the front-end. Therefore you should start there because _____. Select all that apply.

✗ ☑  A)  ... it is simpler to optimize

✓ ☐  B)  ... it has proven to work

✗ ☑  C)  ... it has great potential for improvement

✓ ☐  D)  ... Wilfredo Pareto Principle says so

➡ ✓ ☑  E)  ... it is much cheaper than changing back end

## Question 2
**2 / 2 points**

[2 Points] What is the most important rule for improving web site performance? Select one answer.

- ○ Minify JavaScript
- ✔ ● Compress components
- ○ Cache every resource
- ○ Add Expire headers
- ○ Minify CSS

## Responsive Website Design (RWD) Questions

## Question 3
**2 / 2 points**

**[2 points] Consider the following media queries:**

```
<link rel="stylesheet" media="only screen and (min-width:320px) and
(max-width: 760px)" href="css1.css">

<link rel="stylesheet" media="only screen and (min-width:761px) and
(max-width: 1100px)" href="css2.css">
```

**What different device sizes they fail to support? Select all that apply.**

- ✔ ☑ **Devices with large screens**
- ✔ ☑ **Devices with small screens**

## Question 4
**2 / 2 points**

**[2 points] What are properties of fluid grids? Select all that apply.**

- ✔ ☑ **Elements will adjust their widths and heights by the specified proportions to their parent container**
- ✔ ☐ **Have to adjust width manually for certain devices**
- ✔ ☑ **Defined using relative dimensions**
- ✔ ☐ **Define grids based on number of rows and columns**

## Question 5                                                    2 / 2 points

[2 Points] Switching between display `x.style.display = "block";`
and `x.style.display = "none";` may be used in RWD.

✓  ● a) True

   ○ b) False

## Question 6                                                    2 / 2 points

**[4 points] Select which concepts are the basis of Responsive Website Design. Select all that apply.**

✓ ☑ **fluid grids**

✓ ☑ **CSS3 media queries**

✓ ☐ **content reduction**

✓ ☑ **flexible images**

## Cookies and Privacy Questions

## Question 7                                                1.714 / 2 points

**[2 points] Which of the following are different types of cookies? Select all that apply.**

➡ ✓ ☑ **Server-side cookies**

   ✓ ☐ **Fourth-party cookies**

➡ ✓ ☑ **Persistent cookies**

➡ ✗ ☐ **Conversion-tracking cookies**

➡ ✓ ☑ **Non-secure cookies**

➡ ✓ ☑ **Non-secure cookies**

➡ ✓ ☑ **Client-side cookies**

## Question 8                                                    2 / 2 points

[2 points] Select all statements that are <u>true</u> for th**e HttpOnly** attribute of
cookies. Select all that apply.

✓ A cookie with HttpOnly attribute can only be accessed by the web server.

✓ The HttpOnly attribute tells the browser not to make it discoverable through document.coookie.

✓ A cookie with HttpOnly attribute can only be accessed through a secure connection.

✓ A cookie with HttpOnly attribute cannot be accessed via client-side scripting languages.

✓ A cookie with HttpOnly attribute cannot be stolen easily via cross-site scripting attacks.

## Question 9                                                    1.667 / 2 points

[2 points] Select all functions that cookies can do. Select all that apply.

➡ ✓ Track user IP address.

➡ ✓ Track user visits.

➡ ✓ Store site information.

✗ Track user e-mail.

✓ Write data to disk.

✓ Install malware.

## 1St Half Course Questions

## Question 10                                                    2 / 2 points

[2 Points] Consider the following example from w3schools.com.

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

<button
onclick="removeHandler()">Try
it</button>

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

<script>
document.addEventListener("mousemove",
myFunction);

function myFunction() {

document.getElementById("demo").innerHTML
= Math.random();
}

function removeHandler() {

document.removeEventListener("mousemove",
myFunction);
}
</script>

</body>
</html>
```

What happens when one clicks the "Try it" button?

✓ ● Nothing

○ A random number is displayed immediately

○ A random number is displayed every time you move your mouse in this document.

## Question 11                                                           1.333 / 2 points

[2 Points] What are true statements of HTML "anchors"? Select all that apply.

✓ ☑ To create the target for an anchor with fragment, you must use the 'id' attribute

✓ ☑ Fragment identifiers and related IDs must be exactly matched

✗ ☑ Must be unique within a document

▼ Hide question 11 feedback

You can have as many anchors in an HTML document, as you wish.

## Question 12                                                                 0 / 2 points

[2 Points] Consider the following Python code:

```
b = "Hello, World!"
print(b[-5:-2])
```

What gets printed?

✗ ⦿ Wor

○ rld

○ orl

## Question 13                                                                 2 / 2 points

[2 Points] Consider the following example from w3schools.com.

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

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

<script>
const text = '{"name":"John",
"age":"function() {return 30;}",
"city":"New York"}';
const obj = JSON.parse(text);
obj.age = eval("(" + obj.age +
")");
document.getElementById("demo").innerHTML
= obj.name + ", " + obj.age();
</script>

</body>
</html>
```

What string is displayed in the browser window?

  A)  John, function() {return 30;}

  B)  <a syntax error>

✓  C)  John, 30

▼  Hide question 13 feedback

See https://www.w3schools.com/js/tryit.asp?
filename=tryjson_parse_function

## Question 14                                         1.5 / 2 points

[2 Points] Select all the JavaScript statements that are syntactically correct.

⇒ ✓ ☑ var multipleValues = [ ];

⇒ ✗ ☐ var multipleValues = new Array();

⇒ ✓ ☑ var multipleValues = Array();

⇒ ✓ ☑ var multipleValues = Array(5);

## Question 15                                          2 / 2 points

[2 Points] Below are lines extracted from the CSS style sheet of google.com.

```
.gb_T a {
    border: 1px solid #e5e5e5;
    -webkit-box-shadow: 0 1px 2px rgba(0, 0, 0, 0.1);
    box-shadow: 0 1px 2px rgba(0, 0, 0, 0.1);
    background: #fff;
    cursor: -moz-grabbing;
    cursor: -webkit-grabbing;
    margin: -1px;
    visibility: visible;
    z-index: 1001
}
```

Select any HTML example of usage of the CSS declaration above. Select all the snippet swhere this CSS is triggered.

✓ ☑
```
<div class="gb_T">
      <a href=http://www.example.com>example </a>
  </div>
```

✓ ☐
```
<div class="gb_T">
      <b>href=http://www.example.com>example</b>
  </div>
```

✓ ☐
```
<a href=http://www.example.com
  class="gb_T">example</a>
```

✓ ☑
```
<span class="gb_T">
      <a href=http://www.example.com>example </a>
```

```
</span>
```

## Question 16
**0 / 2 points**

[2 Points] Where are proxy servers utilized?

➡ ○ Both, at the client and server sides.

○ At the client side only

✖ ◉ At the server side only

## REST Questions

## Question 17
**1 / 1 point**

[1 Point] In REST Web Services, it is best practice to use the slash "/" to represent a parent-child relationship.

✔ ◉ A) True

○ B) False

## Question 18
**1 / 1 point**

[1 Point] In REST Web Services, select the best URI.

✔◉ A) http://www.boeing.com/airplanes/747

○ B) http://www.boeing.com/airplanes/747.html

## Question 19
**1 / 1 point**

[1 Point] In REST Web Services, select the best URI.

○ A) http://www.parts-depot.com/parts?part-id=00345

✔◉ B) http://www.parts-depot.com/parts/00345

## Question 20                                          1 / 1 point

[1 Point] In REST Web Services, POST and PUT may be used for "updating" items.

✓ ◉ A) True

○ B) False

## Question 21                                          1 / 1 point

[1 Point] In REST Web Services, plain text and CSV format may be used in formatting the responses.

✓ ◉ A) True

○ B) False

## Question 22                                          0 / 1 point

[1 Point] In REST Web Services, it is best practice to use nouns in the logical URI, not verbs.

➡ ○ A) True

✗ ◉ B) False

## Question 23                                          2 / 2 points

**[2 points] For REST Web Services, select the statements that are <u>TRUE</u>. Select all that apply.**

✓ ☐ **REST services are a W3C recommendation**

✓ ☑ **REST services are platform independent**

✓ ☑ **REST services can use HTTPS**

✓ ☐ **REST services are language dependent**

✓ ☑ **REST services do not offer security**

## Question 24                                          2 / 2 points

[2 points] When comparing REST with other Web Services approaches, what statements are TRUE? Select all that apply.

✓ ☑ A) XML-RPC protocol and REST use HTTP as a transport.

✓ ☑ B) REST is popular because of its simplicity.

✓ ☑ C) SOAP APIs are very robust

✓ ☐ D) Simple Object Access Protocol is simpler than XML-RPC and JSON-RPC.

## JQuery Questions

### Question 25      2 / 2 points

[2 Points] jQuery is not needed when DOM manipulation is not used.

✓ ◉ a) True

○ b) False

### Question 26      2 / 2 points

**[2 points] Which of the following selectors are part of the Basic selectors category? Select all that apply.**

✓ ☑ **Multiple**

✓ ☑ **Element**

✓ ☐ **Form**

### Question 27      2 / 2 points

**[2 points] What is the JavaScript object added by jQuery? Select all that apply.**

✓ ☑ **$**

✓ ☑ **jQuery**

### Question 28      0 / 2 points

**[2 points] What type of selector is the name="value" selector, as in the following example:**

```
$("input[value='Hot Fuzz'] ").text( "Hot Fuzz" ) ;
```

⇒ ◯ **Attribute Equals selector**

✖ ⦿ **Attribute Text selector**

◯ **Attribute Contains selector**

## Question 29
**2 / 2 points**

[2 points] What type of selector is the ':contains()' selector, as in the following example:

```
$( "div:contains('John')" ).css( "text-decoration", "underline" );
```

**Select one correct answer.**

◯ **Child Filter category**

◯ **Child Contains category**

✔⦿ **Content Filter category**

## Question 30
**2 / 2 points**

[2 points] Which of the following objects are abstracted by jQuery? Select all that apply.

✔☑ **XMLHttpRequest**

✔☑ **JSON**

✔☑ **DOM**

## Serverless Questions

## Question 31
**2 / 2 points**

[2 points] Select features of a "container." Select all that apply.

✔☑ **made mainstream by Docker**

✔☑ **portable**

✔☐ **requires a VM**

## Question 32
**2 / 2 points**

[2 Points] Consider the following code snippet.

```javascript
exports.handler = async (event, context) => {
    let body;
    let statusCode = '200';
    const headers = {
        'Content-Type': 'application/json',
    };

    try {
        switch (event.httpMethod) {
            case 'DELETE':
                body = await
dynamo.delete(JSON.parse(event.body)).promise();
                break;
            case 'GET':
                body = await dynamo.scan({ TableName:
event.queryStringParameters.TableName }).promise();
                break;
            case 'POST':
                body = await
dynamo.put(JSON.parse(event.body)).promise();
                break;
            case 'PUT':
                body = await
dynamo.update(JSON.parse(event.body)).promise();
                break;
            default:
                throw new Error(`Unsupported method
"${event.httpMethod}"`);
        }
    } catch (err) {
        statusCode = '400';
        body = err.message;
    } finally {
        body = JSON.stringify(body);
    }
```

```
    return {
        statusCode,
        body,
        headers,
    };
};
```

What is it?

✓ ⦿ An AWS Lambda function

○ A Google Cloud Function

## Question 33
**2 / 2 points**

**[2 points] Which of the following are properties of a container like Docker? Select all that apply.**

✓ ☑ **Containers on same host share single Linux kernel**

✓ ☐ **Not portable**

✓ ☑ **Container images can be shared**

## Question 34
**2 / 2 points**

**[2 points] Select which of the following is <u>true</u> of AWS Lambda? Select all that apply.**

✓ ☑ **Adapts to rates of incoming requests**

✓ ☑ **Functions are unit of deployment**

✓ ☐ **Can be triggered by HTTP only**

## HTML5 Questions

## Question 35
**2 / 2 points**

[2 Points] Consider the following code from W3Schools.

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

```
<canvas id="myCanvas" width="300" height="150" style="border:1px
solid #d3d3d3;">
Your browser does not support the HTML5 canvas tag.</canvas>

<script>
var c = document.getElementById("myCanvas");
var ctx = c.getContext("2d");
ctx.fillRect(20, 20, 150, 100);
</script>

</body>
</html>
```

What gets displayed?

- ◯ A square filled with black
- ◯ A rectangle filled with red
- ✔ ● A rectangle filled with black
- ◯ A square filled with red

## Question 36                                      2 / 2 points

**[2 points] Which of the following are removed elements in HTML5? Select all that apply.**

✔ ☑ **center**

✔ ☐ **embed**

✔ ☑ **font**

✔ ☐ **footer**

✔ ☑ **frameset**

## JavaScript Frameworks Questions

## Question 37                                      2 / 2 points

**[2 points] Which of the following are <u>true</u> of ReactJS? Select all that apply.**

✔ ☑ **Components are building blocks of React apps**

✓☐ **ReactJS can be used to build Android and iOS apps**

## Question 38
2 / 2 points

**[2 points] Select which of the following is <u>NOT true</u> of NodeJS.**

✓☐ **handles networking**

✓☐ **is event driven**

✓✓ **uses blocking I/O model**

## Question 39
2 / 2 points

**[2 points] Which of the following are <u>true</u> of TypeScript? Select all that apply.**

✓✓ **Supports Optionals**

✓☐ **Supports MVC**

✓✓ **Includes support for classes and modules**

## Question 40
2 / 2 points

**[2 points] Select which of the following is <u>true</u> of React. Select all that apply.**

✓☐ **Is a framework like Angular**

✓✓ **Does not implement MVC**

## Ajax Questions

## Question 41
2 / 2 points

**[2 points] Consider the following object:**

```
var xhr = new XMLHttpRequest();
```

**Which values should be checked in the callback? Select all that apply.**

✓✓ **xhr.statusText is OK**

✓✓ **xhr.status is 404**

✓✓ **xhr.readyState is 4**

## Question 42
2 / 2 points

**[2 points] What are some of the characteristics of Ajax applications? Select all that apply.**

✓ ☐ They have static icons

✓ ☑ They are single page

✓ ☑ They present live content

✓ ☑ They have visual effects

## Question 43
**2 / 2 points**

**[2 points] Consider the following code from one of the Ajax example shown in class:**

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN">
<html><head><title>My Third Ajax Script</title>
<script src="script03.js" type="text/javascript"
language="Javascript"></script></head>
<body><div id="pictureBar"> </div></body></html>
```

**And this JavaScript:**

```
window.onload = initAll;
var xhr = false;
function initAll() {   same as previously except it calls getPix }
function getPix() {   xhr.open("GET", "flickrfeed.xml", true);
xhr.onreadystatechange = XXXXX1;
xhr.send(null);setTimeout("getPix()",5 * 1000); }
function showPictures() {
    var tempDiv = document.createElement("div");
    var tempDiv2 = document.createElement("div");
    if (xhr.readyState == 4) {
        if (xhr.status == 200) {
        tempDiv.XXXXX2 = xhr.responseText;
        var allLinks = tempDiv.getElementsByTagName("a");
        for (var i=1; i<allLinks.length; i+=2) {
            tempDiv2.appendChild(allLinks[i].cloneNode(true)); }
        allLinks = tempDiv2.getElementsByTagName("a");
        var randomImg = Math.floor(Math.random() *
allLinks.length);
    document.getElementById("pictureBar").innerHTML =
allLinks[randomImg].innerHTML;
        } else { alert("There was a problem with the request " +
xhr.status); } }   }
```

**What should be the values of the two items listed as XXXXX1 and XXXXX2?**

✓ ⦿ **showPictures and innerHTML**

○ callback and loadHTML

## Question 44
**1 / 1 point**

**[1 Point] Fonts on a web page may be requested across domains using CORS.**

✓ ⦿ True

○ False

## Question 45      1 / 1 point

[1 Point] Images do not have cross-domain issues.

✓ ⦿ A) True

○ B) False

▼ Hide question 45 feedback

Images are considered "safe" and can be retrieved cross-domain

## Question 46      1 / 1 point

[1 Point] Netscape 7 and Mozilla Firefox 1.0 were the first browsers to "clone" XMLHttpRequest functionality from Internet Explorer.

✓ ⦿ A) True

○ B) False

## Question 47      1 / 1 point

**[1 Point] The XMLHttpRequest object can be used to upload a file.**

✓ ⦿ True

○ False

## Question 48      1 / 1 point

**[1 Point] The web browser displays a visual progress indicator while the XMLHttpRequest is being processed.**

○ True

✓ ⦿ False

## Question 49      1 / 1 point

[1 Point] During AJAX open(), what does it mean to pass in <false> to the third parameter and why is it poor practice?

○ A) False means the request will be executed asynchronously. It is bad because it breaks form validation

✓● B) False means the request will be executed synchronously. It is bad because a time-consuming synchronous request on the main thread will degrade UX.

○ C) False means the request will be executed synchronously. It is bad because a time-consuming synchronous request on the main thread will crash the browser.

○ D) False means the request will be executed asynchronously. It is bad because the flow of the application gets disrupted and the order of code execution becomes ambiguous

▼ Hide question 49 feedback

False == synchronous. Synchronous requests on the main thread can be easily disruptive to the user experience and should be avoided; in fact, many browsers have deprecated synchronous XHR support on the main thread entirely. Synchronous requests are permitted in Workers.

**Question 50**                                                                    **0 / 1 point**

[1 Point] What is the major difference between jQuery AJAX and XMLHttpRequest (XHR)?

⇒ ○ A) There is no major difference aside from syntactical sugar

○ B) jQuery is optimized for asynchronous use cases while XHR is not

○ C) jQuery does not support all browsers while XHR does

✗ ⊙ D) jQuery is Google's re-implementation of XHR from scratch for improved usability and efficiency

▼ Hide question 50 feedback

XMLHttpRequest is the raw browser object that jQuery wraps into a more usable and simplified form and cross browser consistent functionality. All jQuery functions use XMLHttpRequest object in the background, but provide additional functionality that you don't have to do yourself.

## Question 51                                                    1 / 1 point

[1 Point] Which of the following is not true about AJAX?

○ A) AJAX uses XMLHttpRequest to communicate with the server

○ B) JQuery includes the same functionality as AJAX

✓⊙ C) AJAX must be performed in your remote script

○ D) AJAX can be performed on submission of a form by adding the onsubmit parameter in the form tag

## Question 52                                                    1 / 1 point

[1 Point] What variable is available to us inside the xhttp.onreadystatechange callback in order to check the state of our request?

○ A) this.currentState

○ B) this.currentStatus

✓● C) this.readyState

○ D) this.state

▼ Hide question 52 feedback

xhttp.onreadystatechange = function() {
if (this.readyState == 4 && this.status == 200) {
document.getElementById(""demo"").innerHTML =
this.responseText;
}
};

## Question 53                                                    1 / 1 point

[1 Point] Which of the following methods dispatches the request to the server when using AJAX?

○ a) if (xhttp.responseText.trim().length > 0) { return false; } return true;

○ b) open(method, url, async)

✓● c) send();

○ d) new XMLHttpRequest();

## Question 54                                                                0 / 1 point

[1 Point] What is true of the fetch() API?

➡ ○ A) Provides a more powerful and flexible feature set than
        XMLHttpRequest()

○ B) It is identical to jQuery's .ajax()

○ C) Unlike jQuery ajax(), cannot set CORS mode

✖ ● D) All of the above

## Web Security Questions

## Question 55                                                                1 / 1 point

Combining VPN and TOR makes a user much more easily traceable.

○ A) True

✔ ● B) False

▼ Hide question 55 feedback

Combining anonymizing VPN + Tor adds an extra layer of encryption and
anonymity making it virtually impossible to trace you.

## Question 56                                                                1 / 1 point

[2 Points] A DDoS attack occurs when a system is overwhelmed with
malicious electronic traffic.

✔ ● a) True

○ b) False

## Question 57                                          1 / 1 point

[2 Points] The major reason to deprecating V2 Onion Service is exposure to attacks.

✓ ⦿ a) True

○ b) False

## Question 58                                          2 / 2 points

[2 points] Which types of hacks can cause <u>damage to the user </u>on the client side? Select all that apply.

✓ ☑ **Log user keystrokes**

✓ ☑ **Stealing cookies**

✓ ☐ **Denial of Service**

✓ ☑ **Install malicious software**

✓ ☐ **Deface pages, altering content**

## Question 59                                          2 / 2 points

[2 points] Which of the following are client-side attacks? Select all that apply.

✓ ☑ **Clickjacking**

✓ ☐ **Insufficient Authentication**

✓ ☑ **Browser and Plugin vulnerability**

✓ ☑ **Cross-site scripting (XSS)**

✓ ☐ **Cross-Site Request Forgery (CSRF)**

## Question 60                                          1 / 2 points

[2 Points} What are <u>true</u> statements of "Diceware" generated passwords? Check all that apply.

➡ ✓ ☑ Creates passwords that are extremely secure

➡ ✗ ☐ Creates passwords that are easy to memorize

✔ ☐ Creates password will low entropy

✘ ☑ Created by rolling a dice 5 times

**Done**