

Quiz #1

⚠ This is a preview of the draft version of the quiz

Due Apr 28, 2020 at 10am **Points** 45 **Questions** 15
Available Apr 27, 2020 at 11:30am - Apr 28, 2020 at 10am about 23 hours
Time Limit 45 Minutes

Instructions

You have 45 minutes for this quiz; the number of points for each question indicates roughly how many minutes you should spend on that question.

Since this quiz is considered a take-home under the Stanford Honor code, it is open-book and open-resource. Students can consult textbooks, search online, read notes, etc. while completing a quiz. Collaboration with others except for the course's instructional staff is prohibited.

Note: CS142 is graded on a curve. Your grade is dependent on your performance and its relationship with regards to the rest of the class. Collaboration in the form of helping others is not only dishonorable; it can adversely affect your grade.

Note: This quiz is known not to display correctly on the Safari browser.

This quiz is no longer available as the course has been concluded.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	45 minutes	3 out of 45 *

* Some questions not yet graded

⚠ Correct answers are no longer available.

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Unanswered

Question 1

1 / 3 pts

Assume you are given a JavaScript array named `arr` and function named `getBigRandom()` that returns a random number between 0 and 9000000000000000.

Consider the following code:

```
let arr = [1, 2, 3, 4, "hello", true, false, true,
let t = typeof (arr[getBigRandom()]);
console.log(t);
```

that prints out the type of an entry in the array chosen by `getBigRandom()`;

If you execute the code a million times, what would you expect to be the most frequently returned JavaScript type? Explain your answer.

Your Answer:

Unanswered

Question 2

1 / 3 pts

You have some JavaScript code that contains the expression

```
foo()()()()() === foo
```

Write a function `foo` that would cause the above statement to return true.

Your Answer:

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You encounter a large web application in which every class name starts with a prefix encoding the pathname in the source code repository containing the CSS file with rules targeting the class. For example, the CSS classes referred to in `product/module/foo.css` all have names starting with `product-module-foo`. Describe the issue in CSS the developers are trying to mitigate by this naming convention.

Your Answer:

Unanswered

Question 4

Not yet graded / 2 pts

Using JavaScript in the browser, it is trivial to write a program that reads input from the user and displays it by writing HTML into the DOM. For example, writing something as simple as

```
<b> characters </b>
```

would display the user's input characters in bold.

The simple approach above works for most characters the user could type but there are several nonalphanumeric characters that don't show up correctly. Explain the problem and what you would have to do to correctly display these characters.

Your Answer:

Unanswered

Question 5

0 / 2 pts

Identify the parts of the following URL:

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- /wiki/Internet. [Select]
- https [Select]
- en.wikipedia.org [Select]

Answer 1:

(You left this blank)

Answer 2:

(You left this blank)

Answer 3:

(You left this blank)

Answer 4:

(You left this blank)

Unanswered

Question 6

Not yet graded / 2 pts

Concisely explain the difference between the return values of `function.bind()` and `function.call()`.

Your Answer:

Unanswered

Question 7

Not yet graded / 3 pts

Consider a complex web application with many hyperlinks going between different views in the website and fetching many different images. CSS.

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- Yes, the switching could be done without changing any of the URLs in the web application.
- No, some changes would be required, no matter how it was built.

Your Answer:

Unanswered

Question 8

Not yet graded / 2 pts

A new intern joins the company you are working for and on the first day, they run a script that effectively inlines all the CSS files. The script changed all the tags of the form:

```
<link rel="stylesheet" type="text/css" .. />
```

in the HTML file with the contents of the specified CSS file inside a

```
<style type="text/css"> ... </style>
```

Although the web application continues to work, explain why this is not an improvement with examples of what would be worse off if the change was left in.

Your Answer:

Unanswered

Question 9

Not yet graded / 4 pts

In lecture we talked about two common JavaScript idioms using the "short-circuit evaluation" operators || and &&. The two examples were:

```
hostname = hostname || "localhost";
```

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how JavaScript && and || operators work.

(b) For each of the examples, describe what would happen if you accidentally used the other operator in its usage pattern (e.g. `hostname = hostname && "localhost";`)

Your Answer:

Unanswered

Question 10

Not yet graded / 4 pts

As HTML has gotten older some of the tags useful in the early days and fallen out of favor and their use is discouraged. For each of the following HTML tags, describe if they are in or out of favor and if out of favor describe why?

- `<p>`
- ``
- `<h1>`
- ``

Your Answer:

Unanswered

Question 11

Not yet graded / 5 pts

Consider the following JavaScript code:

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```

"use strict";
function MyClass() {
}
MyClass.prototype.myMethod = function (a) {
  let f1 = function () { return this; };
  let f2 = () => this;
  if (a === 0) return f1() === f2();
  if (a === 1) return f1() === f1();
  if (a === 2) return f2() === f2();
  return false;
}
var m = new MyClass;
console.log(m.myMethod(0));
console.log(m.myMethod(1));
console.log(m.myMethod(2));

```

Describe what the three boolean values outputted to the console log would be and explain the reasoning.

Your Answer:

Unanswered

Question 12

Not yet graded / 2 pts

JavaScript has a way of allocating objects (i.e., the new keyword) and modifying objects by adding and remove properties but lacks a way for the programmer to explicitly deallocate/free objects. Explain how long-running JavaScript programs don't run out of memory without a way for the programmer to free the memory allocated for the objects.

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Question 13

Not yet graded / 2 pts

Explain the reason why code that manipulates large integers that works fine in Java and C++ can break in JavaScript. For example:

```
number1 = 10000000000000000000;  
number2 = number1 + 1  
(number1 == number2)
```

has the comparison return false in Java and C++ but true in JavaScript.

Your Answer:

Unanswered

Question 14

Not yet graded / 6 pts

You are given an HTML document containing many paragraphs tags each with a unique id attribute (e.g. `<p id="p1">`). For all the following changes to the display of the document, state if the change could be made using only CSS rules without changes to the HTML:

1. Make some but not all paragraphs displayed in bold red.
2. Remove some but not all paragraphs from the displayed document.
3. Reorder some paragraphs in the displayed document.
4. Make a word that appears in the document show up redacted (i.e. every occurrence of the word covered by a black box).

State and briefly explain your answer for all 4 changes.

Your Answer:

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Consider an HTML document where every tag has a CSS "position: absolute;" rule on it. If you forget to put a position property on a tag it would not be considered an error by the browser. Describe how the browser would determine the position of the item with the forgotten positioning rule?

Your Answer:

Quiz Score: **3** out of 45

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