

General rules

1. This test is **open book**. You may consult the class notes, the recordings of the lectures, your programs, the textbook, and the Internet. But you must cite any sources you consult.

Sources consulted:

2. You may use up to 50 minutes for this exam (including any time you spend consulting sources). If you have a documented disability, you may spend additional time as agreed upon in your official letter of accommodation.

Reason for turning in after 9:50 EST Monday, March 15:

3. You must submit this exam via Canvas. You may (1) print the exam, write on it, then scan or photograph it, or (2) write the answers on paper, then scan/photograph them, or (3) enter the answers into a computer file using Word or something similar, including pictures, then export the file as PDF. I prefer PDF, but JPEG is also acceptable. You may submit multiple pages either by multiple submissions or (preferably) as a single ZIP file.

4. You must sign this note (either scan this page or write it on your test:

I have not spoken with other people about this exam, and I will not speak with others who have not finished the exam. I have only used the allowed amount of time on the exam.

Signature: _____

1 Basics

- (a) Is Firefox a **web server** or a **web client**? (Circle one)
- (b) Consider this URL: `https://www.cs.uky.edu/~aStudent/file.cgi` What is the **protocol** of that URL? _____
- (c) In the MultiLab, what is the **full path name** of the file that the URL above specifies?
- (d) In the MultiLab, the file that the URL specifies has permissions 664 (in octal). Does the web server respond to the URL above by (1) sending the file or (2) running the file as a program and sending its output (Circle **(1)** or **(2)**.)
- (e) Is it valid HTML to embed a `` region within the `<head>` region? (Circle **yes** or **no**).

2 HTML

This question refers to `https://www.cs.uky.edu/raphael/courses/CS316/exams/sample.html`.

- (a) This web page has one HTML error. What is the error?
- (b) I want to put a black box around the first verse of Frost's poem. Without putting any content in the `<head>` region or using any JavaScript, how can I do that? Be specific: What do you put and where?
- (c) The last lines of the poems are in a different font. Why?
- (d) What is the purpose of the `integrity` attribute in the `<script>` region?

3 Navigating the DOM

This question also refers to <https://www.cs.uky.edu/raphael/courses/CS316/exams/sample.html>. You should try out your answers using the Developer Tools console. You may not use jQuery for this question.

- (a) Write a JavaScript expression using the DOM (but without using XPath) that results in the `<pre>` node containing Frost's poem. (There are many correct answers).

- (b) Given that the variable `p` has as its value that `<pre>` node, write a JavaScript statement that uses `p` and changes the color of that region to red.

- (c) Write an XPath expression that evaluates to an array of all `<pre>` nodes. (There are many correct answers).

- (d) Given that the variable `xp` holds the results of that XPath expression, write a single JavaScript statement that uses `xp` and changes the background color of all `<pre>` nodes to yellow.

4 CSS and jQuery

This question also refers to <https://www.cs.uky.edu/raphael/courses/CS316/exams/sample.html>. You might want to copy this web page to one you can modify in order to verify your answers.

- (a) Write CSS that you could place in the `<style>` region to put a 6px green shadow, blurring over 6px, to the right and below each `<td>` region.

- (b) Write CSS that you could place in the `<style>` region to make the background color "light-blue" and the font weight "bold" in the `<td>` region containing Frost's first verse.

- (c) Write a single JavaScript statement that uses jQuery has exactly the same effect (color and font weight in that region).

- (d) Write JavaScript code that causes the size of the font in Frost's first verse to become 30px when the mouse moves into that region (the event is called "mouseenter").

5 Organization

- (a) Does PHP run (1) in the browser or (2) on the web server's host? (Circle **(1)** or **(2)**.)
- (b) Are SQL queries generated by (1) the browser or (2) a CGI program? (Circle **(1)** or **(2)**.)
- (c) If I have a database relation called MYRELATION, what SQL query returns all the fields of all the entries in that relation?

- (d) Why are AJAX calls sometimes preferable to `<form>` submits?