Assignment 7: JavaScript Randomizer

9.5/10 Points

10/26/2023

Offline Score: **9.5/10**

View Feedback

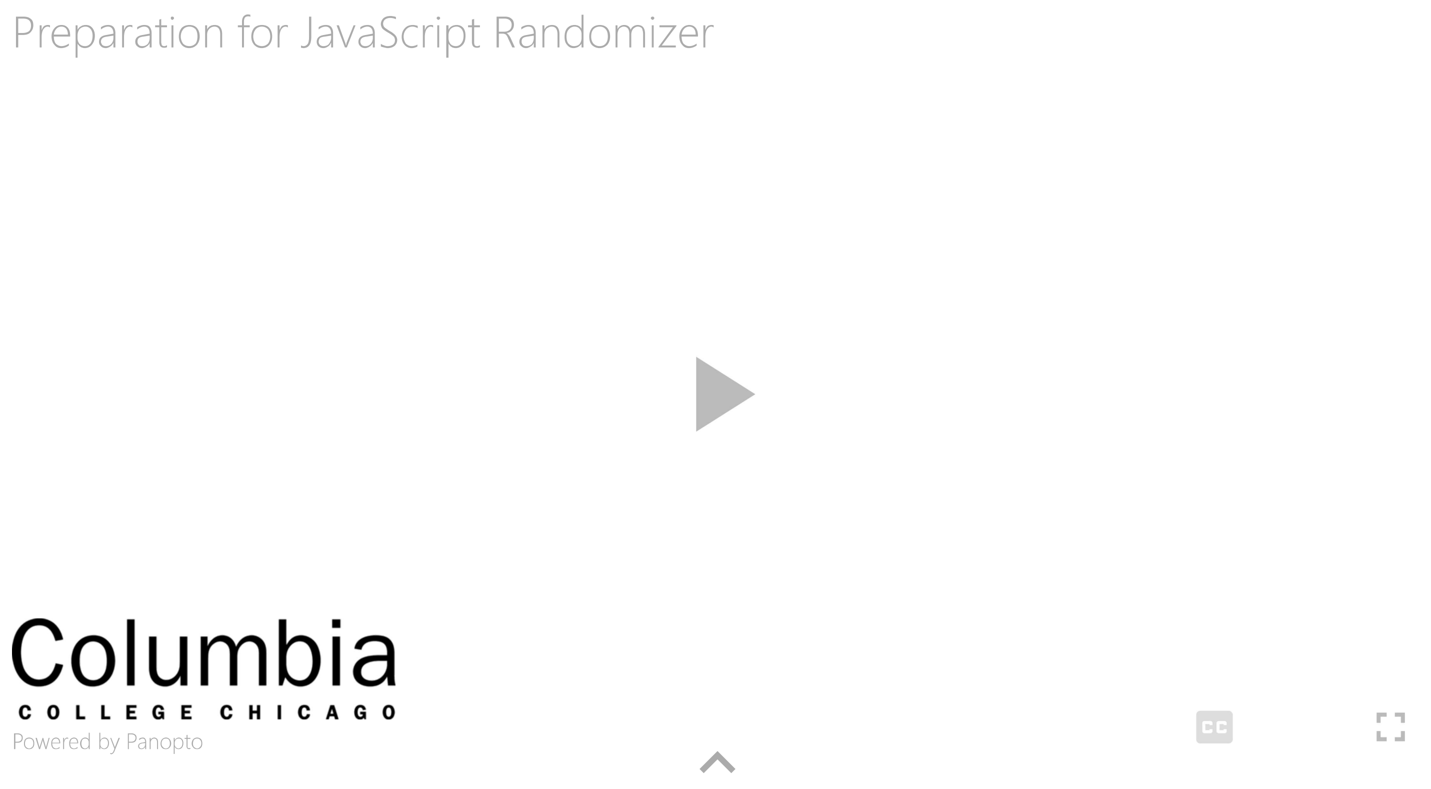
Anonymous Grading: **no**

Details

There is a tradition in learning JavaScript to create a "magic 8 ball" — a simple application that allows a user to ask a question, and receive an answer randomly drawn from a pre-defined set of answers. You will use this as a basis for this assignment, but make it much more unique and interesting.

This assignment **does not have to be responsive** — you can write your code for the desktop experience, strictly.

The following is an ***optional*** introduction to this assignment:



HTML

First, create a element within the **<body>** of a new website template. Create a question to prompt an answer for the <input> box. Here is the recommended, basic format (but not the only possibility):

```
<form>
  <p>A question or prompt</p>
  <input type="text">
  <input type="button" onclick="someFunctionName()" value="text for inside the button">
</form>
```

You can be creative as to how you design a question/prompt, and you can place it anywhere in the document that you wish.

The <input type="button"> will have a generic appearance in the browser, but once you apply CSS to the button, you can have fun with it. You can write the following CSS selector to target this button specifically:

```
input[type="button"] {
     ...CSS code here...
}
```

(Also, adding a class name to the <input> would also work.)

JavaScript code

Write the following code within the **<head>** of your document:

```
<script>

function someFunctionName() {
    var answers = [
        "statement 1",
        "statement 2",
        "statement 3",
        ...etc...
    ];

    ...additional JS code will eventually be typed in this space...

} //closes your function

</script>
```

This is the basic format for your **array** — a list of multiple **values** ascribed to a single **variable**. Create a list of **10 statements** as responses to the user's input in the <form>. ***Make sure that the 10th statement is NOT followed by a comma!***

Copy'n'paste the following into your JS code, *after* the array:

```
var createAnswer = answers[Math.floor(Math.random()*answers.length)];
```

Explanation: Here, the **Math.random() (https://www.w3schools.com/jsref/jsref_random.asp)** randomizes a number between 1 and 0 (with decimals) and **answers.length (https://www.w3schools.com/jsref/jsref_length_array.asp)** inspects the number of values in the array, which in your case will be "10". * is the familiar multiplication symbol. 10 is multiplied by the first number, and **Math.floor() (https://www.w3schools.com/jsref/jsref_floor.asp)** rounds this number downward to the nearest integer.

For example:

1. Math.random() could produce 0.26267042959217834.
2. 0.26267042959217834 * 10 = 2.6267042959217834
3. Math.floor() cleans this up to render **2**.
   — this operation will produce a number from 0 to 9, to account for each of our 10 values. JavaScript counts up from 0, which is different from our own counting system.

Now the statement can be understood this way:

var createAnswer = answers[2]

— which translates to "third value in the array" (counting up from 0 to 2), and this will be the new value stored inside of createAnswer.

"Did I really need to know that explanation?"
Not really. It's for those who want to know how things work. If you copy the JS format faithfully, your code will function.

The next step is the challenge

Now that the random statement has been selected by the JS code, you'll need to make it appear on the page somewhere. The element you will target is **<p id="message"></p>** (you will write this new element into your document). Consult the resources below:

getElementById() method (http://www.w3schools.com/jsref/met_document_getelementbyid.asp)
—this will show you how to target a specific HTML element in your page by its id name

innerHTML() method (http://www.w3schools.com/jsref/prop_html_innerhtml.asp)
—this will show you how to change the text content of a targetted HTML element

Keep in mind that you are employing the power of a variable! A variable can be used as an alternative to "text".

Once you have accomplished all of this, the randomized statements will be available to any CSS applied to **p#message { }** in your style.css file.

Some caveats

1. Although this is based on the classic "magic 8 ball" JavaScript lesson, please DO NOT use a visual magic 8 ball theme! It's been done a million times.
2. There are endless tutorials for creating the "magic 8 ball" application from the last 30 years. Many will use outdated methods for writing JS, or demonstrate over-complicated JS coding.

Images

Any images, foreground or background, must be your own.

Responsive CSS design?

You are not required to use your CSS media queries for this assignment — you are welcome to create a desktop-only JavaScript experience. However, it's not a bad idea to control your #container for the sake of your viewport composition.

What I'm looking for

- Correct HTML syntax
- CSS attention
- A functional use of an HTML form + JS to activate an array — *this could qualify you for a B grade*
- Indulging in other JavaScript + CSS tricks, to make this assignment really interesting and dazzling — *this could qualify you for an A grade*