

Yifeng Huang

ART101 - Programming for the Arts

2024 Spring Quarter

Lab 13: Loops

5/21/2024

Links to the lab assignment result

Home Page: <https://yhuan359.github.io/art101>

This Lab page: <https://yhuan359.github.io/art101/lab13/index.html>

Summary of Efforts

My efforts on this page was very hard. I was not fa

Screenshots:

Task 1: Create an index.html for your lab

```
lab13 > index.html > html > body > section > div#reflections.minor-section
1 <html>
2 <head>
3   <link rel="stylesheet" type="text/css" href="../../css/site.css">
4   <link rel="stylesheet" type="text/css" href="css/lab.css">
5   <script src="https://code.jquery.com/jquery-3.7.1.min.js"></script>
6   <script src="js/lab.js" defer></script>
7 </head>
8
9 <body>
10   <main id="content"></main>
11   <section>
12     <h1> Lab 13: Loops </h1>
13     <div id="challenge" class="minor-section" id= "challenge">
14       <h2> Challenge </h2>
15       <p> Understanding the concept of conditionals. </p><br/>
16     </div>
17
18     <div id="problems" class = "minor-section" id= "problems">
19       <h2> Problems </h2>
20       <p> I struggled with the mod numbers and understanding that the lab.js is supposed to be at the bottom.</p><br/>
21     </div>
22
23     <div id = "reflections" class="minor-section" id= "reflections">
24       <h2> Reflection </h2>
25       <p> Check the console for the results<br/></p><br/>
26     </div>
27     <div>
28       Where should we stop? <input type="number" min=0 max="1000" id="max"><br>
29       Which factors should print?<br>
30       <table>
31         <tr>
32           <th>Factor</th>
33           <th>Prints what?</th>
34         </tr>
35
36         <tr>
37           <td><input type="number" min=0 max="23" id="num0"></td>
38           <td><input type="text" id="text0"></td>
39         </tr>
40
41         <tr>
42           <td><input type="number" min=0 max="23" id="num1"></td>
43           <td><input type="text" id="text1"></td>
44         </tr>
45
46         <tr>
47           <td><input type="number" min=0 max="23" id="num2"></td>
48           <td><input type="text" id="text2"></td>
49         </tr>
50
51         <tr>
52           <td><input type="number" min=0 max="23" id="num3"></td>
53           <td><input type="text" id="text3"></td>
54         </tr>
55       </table>
56       <button id="submit">Run</button>
57     </div>
58     <h3> Output </h3>
59     <div id="output"></div>
60   </div>
61 </html>
62
63
```

Task 2: Create a JavaScript file (originally from professor which I edited)

```
maxFactors = 4;

outputEl = document.getElementById("output");

// get the values from the webpage and write them in an object
// this expects to have input fields with ids num0, text0, num1, text1, etc
// returns an object that looks like this:
// {3: "Fizz", 5: "Buzz", 7: "Boom"}
function getFactorObj() {
  var factorObj = {};
  for (var factor=0; factor<maxFactors; factor++) {
    numId = "num" + factor;
    textId = "text" + factor;
    numValue = document.getElementById(numId).value;
    textValue = document.getElementById(textId).value;
    console.log(factor + " num:", numValue, "text:", textValue)
    // if either value is blank, don't use it
    if (numValue && textValue) {
      factorObj[numValue] = textValue;
    }
  }
  return factorObj;
}

function outputToPage(str) {
  newEl = document.createElement("p");
  newEl.innerHTML = str;
  outputEl.appendChild(newEl);
}

// // For numbers which are multiples of both 3 and 5, print "FizzBuzz"
// if ((i % 3 == 0) && (i % 5 == 0) && (i % 7 == 0)) {
//   console.log("FizzBuzzBoom");
// }
// // For numbers which are multiples of both 3 and 5, print "FizzBuzz"
// if ((i % 3 == 0) && (i % 5 == 0)) {
//   console.log("FizzBuzz");
// }
// // For numbers which are multiples of both 3 and 5, print "FizzBuzz"
// if ((i % 3 == 0) && (i % 7 == 0)) {
//   console.log("FizzBoom");
// }
// // For numbers which are multiples of both 3 and 5, print "FizzBuzz"
// if ((i % 5 == 0) && (i % 7 == 0)) {
//   console.log("BuzzBoom");
// }
// // If the number is a multiple of 3, print "Fizz" instead of the number.
// else if (i % 3 == 0) {
//   console.log("Fizz");
// }
// // If the number is a multiple of 5, print "Buzz" instead of the number.
// else if (i % 5 == 0) {
//   console.log("Buzz");
// }
// // If the number is a multiple of 7, print "Boom" instead of the number.
// else if (i % 7 == 0) {
//   console.log("Boom");
// }
// else {
//   console.log(i);
// }
```

```
function fizzBuzzBoom(maxNums, factorObj) {
  // iterate over all of our numbers
  for (var num=0; num<maxNums; num++) {
    debugger;
    // reset output string
    var outputStr = "";
    // iterate over the factors we got from the html
    for (var factor in factorObj) {
      // check to see if this num is a multiple of factor
      if (num % factor == 0) {
        // if yes, then add the text to output string
        outputStr += factorObj[factor];
      }
    }
    // now if we have words in outputStr, format it like this " - FizzBuzz!"
    if (outputStr) {
      outputStr = " - " + outputStr + "!";
    }
    outputToPage(num.toString() + outputStr)
  }
}

function reportError(str) {
  outputEl.innerHTML = "<div class='error'>" + str + "</div>";
}

document.getElementById("submit").addEventListener("click", function() {
  var max = document.getElementById("max").value;
  console.log("max:", max)
  if (!max) {
    reportError("You need to provide a maximum");
    return;
  }
  var factorObj = getFactorObj();
  console.log("factorObj:", factorObj);
  if (Object.keys(factorObj).length === 0) {
    reportError("You need to provide at least one factor and text");
    return;
  }
  // clear error if there is one
  outputEl.innerHTML = "";
  fizzBuzzBoom(max, factorObj);
  outputEl.classList.add("cols");
})
```

Task 3: Test, Debug and upload

Lab 13: Loops

art101/lab13/index.html at mas

yhuan359.github.io/art101/lab1

yhuan359.github.io/art101/lab13/index.html

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Lab 13: Loops

Challenge

Understanding the concept of conditionals.

Problems

I struggled with the mod numbers and understanding that the lab.js is supposed to be at the bottom.

Reflection

Check the console for the results

Where should we stop?

Which factors should print?

Factor	Prints what?
<input type="text" value="3"/>	<input type="text" value="Fizz"/>
<input type="text" value="5"/>	<input type="text" value="Fuzz"/>
<input type="text" value="7"/>	<input type="text" value="Bang"/>
<input type="text"/>	<input type="text"/>

Output

```
0 - FizzFuzzBang!
1
2
3 - Fizz!
4
5 - Fuzz!
6 - Fizz!
7 - Bang!
8
```

Self-Evaluation Rubric

Self-Evaluation Rubric						
Did you complete the assignment and did you complete it on time?	Submitted on time	Up to 1 day late	Up to 2 days late	Up to 3 days late	Up to 4 days late	Do you need to clarify?
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did you collaborate with a partner?	A lot of effort		Some effort		Not this time	Do you need to clarify?
	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	
Did you put in earnest effort and provide an articulate summary of your experience?	Excellent	Pretty good	About average	Could be improved	Not this time	What supports this? I wasn't really sure what to do exactly and was confused thus having to refer to a reference java
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was the assignment complete, with minimal errors, correct output, and good style?	Excellent	Pretty good	About average	Could be improved	Not this time	What supports this? I reviewed the script multiple times to make sure nothing was wrong before debugging it correctly
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
How much EXTRA effort did you put into the assignment?	A lot of extra effort		Some extra effort		Not this time	What supports this? I made this very simple and followed the basic instructions
	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Summary of your evaluation/efforts: I had an easier time configuring the html than I did with the javascript.						