

## Task 2: Debug Old Labs

In lab 10, we found that `<div>` for output will output the information infinitely as long as we click the buttons. We click the button and output `<div>` to output two lines of information. When the user uses the input box and button a lot of times, it will not look beautiful. What I want to change is that the output `<div>` only changes the information instead of inputting a new one.

I created two `<p>` with id "out1" and "out2" in the output section in the html code, and the new JS code changed the innerHTML of two `<p>` instead of creating two new `<p>`.

```

1 <!DOCTYPE html>
2 <html lang="en" dir="ltr">
3   <head>
4     <meta charset="utf-8">
5     <title>Lab 10</title>
6     <link rel="stylesheet" href="css/index.css">
7     <script src="js/lab10.js" defer></script>
8   </head>
9   <body>
10    <h1 id="head">Lab 10: JavaScript Events and Forms</h1>
11    <div class="">
12      <h2 id = "chall">Challenge</h2>
13      <p>We need to implement JS events for some specific tasks.</p>
14    </div>
15
16    <div class="">
17      <h2>Problems</h2>
18      <p id = "prob">We used some time to figure out addEventListener() of button,
19        because it did not work at first.</p>
20    </div>
21
22    <div >
23      <h2 id="res">Results</h2>
24      <p>We created lab10.js File and here is the program execution</p>
25      <a href="js/lab10.js">Link to Our JS File</a>
26    </div>
27
28    <div>
29      <h2>Input Section</h2>
30      <label for="">Input your name:</label>
31      <input type="text" id="user-name" value="Input You Name">
32      <button id="my-button">Submit Input</button>
33    </div>
34
35    <div id="output">
36      <h2>Output Section</h2>
37      <p id="out1"></p>
38      <p id="out2"></p>
39    </div>
40
41  </body>
42 </html>
43

```

```

1  /*
2   * Author: Mengya Qiu and Yuwei Mao
3   * Created: 13 February 2021
4   * License: Public Domain
5   */
6
7  // Borrow from Lab7.js
8  // superUserNameSorter (for Task X: bonus!) - a function that sort the Letter
9  // Lowercase and uppercase together and ignore spaces.
10 function superUserNameSorter(userName) {
11     //split the name into array
12     var nameArray = userName.split('');
13     //sort the array lowercase and uppercase together.
14     //we changed the compare function in sort() which compare them in upper case.
15     var sortedNameArray = nameArray.sort(function(a, b){
16         return a.toUpperCase().localeCompare(b.toUpperCase());});
17     //remake the array into string without space
18     //1.join with space 2.use split(" ") to remove space 3. join again without space
19     var newUserName = sortedNameArray.join("").split(" ").join("");
20     //return the sorted name
21     return newUserName;
22 }
23 // shuffleUserName (for Task X: bonus!) - a function that shuffle the username,
24 // and capitalize the name. (create anagram)
25 function shuffleUserName(userName) {
26     // split the name into array
27     var nameArray = userName.split('');
28     // shuffle the array by sort in a random function.
29     var shuffledArray = nameArray.sort(function() {return .5 - Math.random();});
30     var newUserName = shuffledArray.join("").split(" ").join("").toLowerCase();
31     // get a number between 0 to length of newUserName and split by this number into 2 parts
32     var n = Math.round(newUserName.length * Math.random());
33     var p1 = newUserName.substr(0,n);
34     var p2 = newUserName.substr(n);
35     // make each part's first letter uppercase.
36     var p1a = p1.split('');
37     p1a[0] = p1a[0].toUpperCase();
38     var p2a = p2.split('');
39     p2a[0] = p2a[0].toUpperCase();
40
41     return p1a.join("") + " " + p2a.join("");
42 }
43
44 //Attach an event listener to our button
45 var button = document.getElementById('my-button');
46 button.addEventListener('click', function() {
47     var inputValue = document.getElementById('user-name').value;
48
49     var para1 = document.getElementById("out1");
50     para1.innerHTML = "Sort: " + superUserNameSorter(inputValue);
51
52     var para2 = document.getElementById("out2");
53     para2.innerHTML = "Anagram: " + shuffleUserName(inputValue);
54
55 });
56

```

## Lab 10: JavaScript Events and Forms

### Challenge

We need to implement JS events for some specific tasks.

### Problems

We used some time to figure out `addEventListener()` of button, because it did not work at first.

### Results

We created lab10.js File and here is the program execution

[Link to Our JS File](#)

### Input Section

Input your name:

### Output Section

Sort: aeimouwY

Anagram: Mwe Uayoi

First Time input

## Lab 10: JavaScript Events and Forms

### Challenge

We need to implement JS events for some specific tasks.

### Problems

We used some time to figure out `addEventListener()` of button, because it did not work at first.

### Results

We created lab10.js File and here is the program execution

[Link to Our JS File](#)

### Input Section

Input your name:

### Output Section

Sort: aegiMnQuy

Anagram: Nme Uagyqi

Second Time input with a different name. And the output `<div>` did not input a new one, and it changes the original information instead. So it is successful!

We also find a small problem in lab13 which only outputs the maximum number -1 instead of the maximum number. For example, if we input 100, the program only outputs up to 99. So We'd like to change something in the for-loop in order to let the program output up to the maximum number exactly.

```

1  /*
2   * Author: Mengya Qiu and Yuwei Mao
3   * Created: 23 February 2021
4   * License: Public Domain
5   */
6
7  //Function Part
8  //FizzBuzz return
9  function FizzBuzz(max,numList,wordList){
10     var printStrAll = "";
11     for (var i=0; i<max*1+1; i++){
12         var printStr = "";
13         var w = false;
14         for (var j=0; j<numList.length; j++){
15             if (i % numList[j] ==0){
16                 printStr += wordList[j];
17                 w = true;
18             }
19         }
20         if (w == true){ printStrAll = printStrAll + i + " - " + printStr + "<br>";}
21         else { printStrAll = printStrAll + i + "<br>";}
22     }
23     return printStrAll;
24 }
25
26 //Main Part
27 $("#b1").click(function (){
28     var numList = [0,0,0,0,0];
29     var wordList = ["","","","",""];
30
31     numList[0] = $("#n1").val();
32     numList[1] = $("#n2").val();
33     numList[2] = $("#n3").val();
34     numList[3] = $("#n4").val();
35     numList[4] = $("#n5").val();
36
37     wordList[0] = $("#w1").val();
38     wordList[1] = $("#w2").val();
39     wordList[2] = $("#w3").val();
40     wordList[3] = $("#w4").val();
41     wordList[4] = $("#w5").val();
42
43     maxN = $("#maxx").val();
44
45     $("#output").html(FizzBuzz(maxN,numList,wordList));
46 })

```

## Lab 13: Loops

### Challenge

We need to implement JavaScript loops in order to input number 1-200 with variations.

### Problems

We met some problems while we write our for loops. The for loop inside cannot always find the right factor numbers, but these are solved after we modified several times

### Results

We created lab13.js File and here is the program execution

[Link to Our JS File](#)

### Input Section

Max Number (0-999):

Special Factor Numbers and Words

Number (1-31)	Word
<input type="text" value="3"/>	<input type="text" value="Fizz"/>
<input type="text" value="5"/>	<input type="text" value="Buzz"/>
<input type="text" value="7"/>	<input type="text" value="Boom"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

#### Output Section

0 - FizzBuzzBoom!	6 - Fizz!	12 - Fizz!	18 - Fizz!
1	7 - Boom!	13	19
2	8	14 - Boom!	20 - Buzz!
3 - Fizz!	9 - Fizz!	15 - FizzBuzz!	
4	10 - Buzz!	16	
5 - Buzz!	11	17	

With an input of 20 as the maximum value, it iterated from 0 to 20 instead of 0 to 19 as before.  
It works !!