CSCI 165 (FLEX) Lab#9

Usually, a lab is made available on Wednesday, and due by Friday midnight of the same week.

JavaScript enhances user experience by adding interactivity to the web pages. The objective of this lab is to learn how to use "loop" to execute the same block of code a specified number of times when a specified condition is true. The 3 common types of loop are covered; they are "for" loop, "while" loop, and "do..while" loop. In this lab, you will create a JavaScript function that calculates the sum of some consecutive integers using the 3 types of loop.

Requirements:

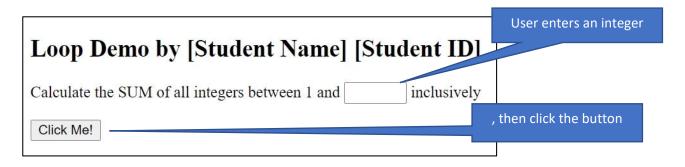
Step 1: Download the work file

Download the **index.html** from the course website. In this lab, you only need to modify index.html. **Note:** Since there is only one file, you don't have to zip it when submitting your work. Don't change the file name of "index.html".

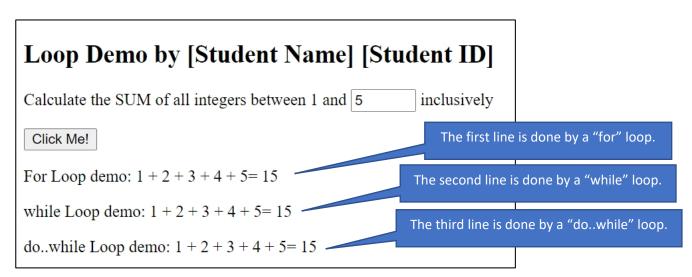
Step 2: Learn the program

Look at the following scenario to have some ideas of the programming logic of the JavaScript function.

Design a JavaScript function that calculates the sum of all consecutive integers for a given range



User enters 5 and then clicks the "Click Me!" button



Design the JavaScript program logic

The program takes an integer (e.g. 5 in the above example) as an input, and outputs the sum of all integers between 1 and the 5 (i.e., the input).

```
<!DOCTYPE html>
 Line#5. Replace these with
 3
   = <head>
                                                        your student information.
 4
          <!-- JavaScript Lab (Loops) -->
          <!-- written by [Student Name] [Student ID] -->
 5
 6
          <title>JavaScript Loops</title>
 7
   中
          <script>
 8
   白
          function demoLoop() {
 9
              var num = parseInt (document.getElementById("number").value);
10
              var sum=0;
11
              var count=0;
12
              var message= "1";
13
              for (count=2; count<=num; count++)</pre>
                                                                Learn the program logic using
14
                  message = message + " + " + count;
15
                                                                       a "for" loop
16
              for (count=1; count<=num; count++)</pre>
17
                  sum = sum + count;
              document.getElementById("displayAnswer 1").innerHTML =
18
19
                   "For Loop demo: " + message + "= " + sum;
20
21
              count=1;
                                                             Learn the program logic
22
              sum=0;
                                                              using a "while" loop
23
   占
              while (count <= num) {
24
                  sum = sum + count;
25
                  count++;
26
27
              document.getElementById("displayAnswer 2").innerHTML =
28
                   "while Loop demo: " + message + "= " + sum;
29
30
              count=1;
                                                           Learn the program logic
31
              sum=0;
                                                            using a "do..while" loop
32
   白
              do {
33
                  sum = sum + count;
34
                  count++
35
              } while (count<=num)
36
              document.getElementById("displayAnswer 3").innerHTML =
37
                   "do..while Loop demo: " + message + "= " + sum;
38
39
                                                      The code for the body part of the page is
40
          </script>
                                                    provided in the given index.html template file.
41
    -</head>
42
43
    □<body>
                                                                     Line#5. Replace these with
44
          <h2>Loop Demo by [Student Name] [Student ID]</h2>
                                                                     your student information.
```

Step 4: Save the index.html

Step 5: Launch (i.e., Run) the Web page using a browser

Test the page to make sure its programming logic is written correctly. Fix any error.

Step 6: Submit the index.html (DON'T change the file name)

Since you have only one file (index.html), upload this html file (without zipping it) to the submission link "Lab#9 Desc Submission" on the Moodle course website.

Assessment

The following penalties will be applied when assessing your work. Penalty will also be applied to overall quality of work. (Note: assessment on quality is subject to the decision of the instructor)

of work (receir disconnection quanty is subject to the decision of the motification)	
Web page/site do not display	-100%
anything on the browser (i.e.,	The most common mistake is "spelling error". Since the source code of the program is given, a
there are error in your code, fix	request of sending your work to instructor before deadline and checking your code will not be
them before submitting you	accepted. Please use the features provided by the IDE, go through the program line by line,
work)	word by word and you can fix the error.
Requirements not fulfilled	Up to -100%; it depends on the % of requirements completed
Incorrect file name(s)	-5% per incorrect name (e.g., index.html.html, index(1).html, etc. are incorrect)
Unorganized code, improper	Up to -30% (use Tab key instead of "a number of spaces" to make indentation, i.e., when you
code formatting,	need to move a code statement to the right with indentation)

More scenarios (for references):

Loop Demo by [Student Name] [Student ID]

Calculate the SUM of all integers between 1 and 10 inclusively

Click Me!

For Loop demo: 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55

while Loop demo: 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55

do..while Loop demo: 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55

Loop Demo by [Student Name] [Student ID]

Calculate the SUM of all integers between 1 and 20 inclusively

Click Me!

For Loop demo: 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 + 19 + 20 = 210

while Loop demo: 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 + 19 + 20 = 210

do..while Loop demo: 1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16+17+18+19+20=210