

JavaScript Assignment 1

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COMP 1073: Client-Side JavaScript

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Screenshots of code

```
Welcome  index.html x
index.html > html > style > p
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Course Marks Input</title>
7  </head>
8  <style>
9      body {
10         font-family: Arial, sans-serif;
11         background-color: #f4f4f9;
12         margin: 0;
13         padding: 20px;
14         color: #333;
15     }
16
17     h3 {
18         color: #2c3e50;
19         font-size: 24px;
20         margin-bottom: 10px;
21     }
22
23     p {
24         font-size: 18px;
25         line-height: 1.6;
26         margin-top: 10px;
27         transition: all 0.3s ease;
28     }
29
30     ul {
31         list-style-type: none;
32         padding-left: 0;
33     }
34
35     li {
36         font-size: 18px;
37         margin-bottom: 5px;
```

```
Welcome index.html X
index.html > html > style > p
2 <html lang="en">
8 <style>
35 li {
38     transition: transform 0.3s ease;
39 }
40
41 h3, p {
42     border: 2px solid #2c3e50;
43     padding: 10px;
44     border-radius: 5px;
45     background-color: #ecf0f1;
46     width: 80%;
47     max-width: 600px;
48     margin: 20px auto;
49 }
50
51 p {
52     background-color: #f9fafb;
53     color: #16a085;
54 }
55
56 p.grade {
57     background-color: #eafaf1;
58     color: #27ae60;
59     font-weight: bold;
60 }
61
62 h3:hover, p:hover {
63     background-color: #dfe6e9;
64     color: #2c3e50;
65     cursor: pointer;
66     transform: scale(1.05);
67 }
68
```

```
Welcome index.html X
index.html > html > style > p
2 <html lang="en">
8 <style>
68
69 li:hover {
70     transform: scale(1.05);
71     cursor: pointer;
72 }
73 </style>
74 <body>
75 <script>
76     // Prompt the user for the number of courses
77     let numOfCourses = prompt("How many courses did you finish?", "0");
78
79     /*
80     JS Built-in functions:
81     - alert() => pop-up message
82     - prompt() => pop-up message with input field
83     - confirm() => pop-up message with yes/no buttons
84     */
85
86     // Convert input to integer
87     numOfCourses = parseInt(numOfCourses);
88
89     // Validate the input
90     if (isNaN(numOfCourses) || numOfCourses <= 0) {
91         // Printing invalid input message and ending the program
92         document.write("<p>Invalid Input!</p>");
93         document.write("<p>The end!</p>");
94     } else {
95         // For Valid input
96         // Declare an empty array for course marks and a variable to hold the total
97         let courseMarks = []; // declare an empty array
98         let total = 0;
99
100         //Initializing the loop counter
101         let i = 1;
```

```

index.html > html > style > p
2   <html lang="en">
74  <body>
75  <script>
102
103      // Loop to populate the array with marks and calculate the total
104      while (i <= numOfCourses) {
105          // Nested functions: prompt() -> convert to number -> push to array
106          let mark = parseFloat(prompt("Enter your marks for course " + i + " (out of 100):"));
107          courseMarks.push(mark); // Add the mark to the array
108          total += mark; // Add the mark to the total
109
110          // Increment the counter
111          i++;
112      }
113
114      // Calculation for the average
115      let average = total / numOfCourses;
116
117      // Round the average to 2 decimal places
118      average = average.toFixed(2); // The `toFixed(2)` method rounds the number to 2 decimal places and returns it as a string.
119
120      // Displays the average and grade based on conditions
121      document.write("<h3>Your final average is: " + average + "</h3>");
122
123      if (average >= 90 && average <= 100) {
124          document.write("<p>Your grade is A</p>");
125      } else if (average >= 80 && average < 90) {
126          document.write("<p>Your grade is B</p>");
127      } else if (average >= 70 && average < 80) {
128          document.write("<p>Your grade is C</p>");
129      } else if (average >= 60 && average < 70) {
130          document.write("<p>Your grade is D</p>");
131      } else if (average < 60) {
132          document.write("<p>Your grade is F</p>");
133      } else {
134          document.write("<p>Sorry, all the marks have to be from minimum 0 to maximum 100!</p>");
135      }
136
137      if (average >= 90 && average <= 100) {
138          document.write("<p>Your grade is A</p>");
139      } else if (average >= 80 && average < 90) {
140          document.write("<p>Your grade is B</p>");
141      } else if (average >= 70 && average < 80) {
142          document.write("<p>Your grade is C</p>");
143      } else if (average >= 60 && average < 70) {
144          document.write("<p>Your grade is D</p>");
145      } else if (average < 60) {
146          document.write("<p>Your grade is F</p>");
147      } else {
148          document.write("<p>Sorry, all the marks have to be from minimum 0 to maximum 100!</p>");
149      }
150
151  }
152  </script>
153  </body>
154  </html>

```

Screenshots of the browser/output

The following table summarizes the data entered in each of the four screenshots:

Screenshot	Message	User Input
1	localhost:3000 says How many courses did you finish?	0
2	localhost:3000 says How many courses did you finish?	5
3	localhost:3000 says Enter your marks for course 1 (out of 100):	87
4	localhost:3000 says Enter your marks for course 2 (out of 100):	61
5	localhost:3000 says Enter your marks for course 3 (out of 100):	50

localhost:3000 says

Enter your marks for course 4 (out of 100):

OK Cancel

localhost:3000 says

Enter your marks for course 5 (out of 100):

OK Cancel

Your final average is: 58.80

Your grade is F

If we put value other than numeric value

localhost:3000 says

Enter your marks for course 1 (out of 100):

OK Cancel

localhost:3000 says

Enter your marks for course 2 (out of 100):

b56

OK

Cancel

Your final average is: NaN

Sorry, all the marks have to be from minimum 0 to maximum 100!