



LAB MODULE 6 CSF3133 – Web-based Interface Design

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6.3 Basic Javascript

Output:

My First JS!

After changing output:

My First *Java Script*

6.4 getElementById()

Output:

What Can JavaScript Do?

javascript can change HTML content.

Click Me!

After clicking output:

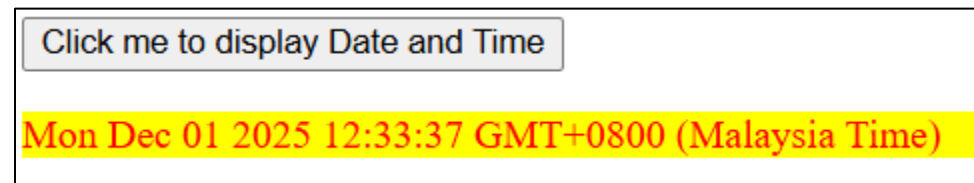
What Can JavaScript Do?

Hello JavaScript!

Click Me!

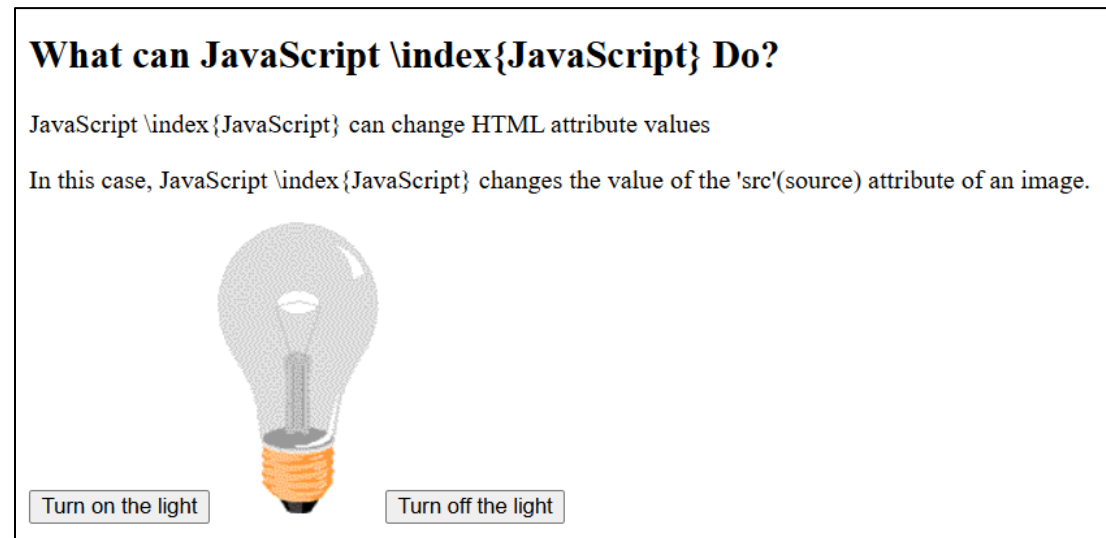
6.5 Date and Time

Output:

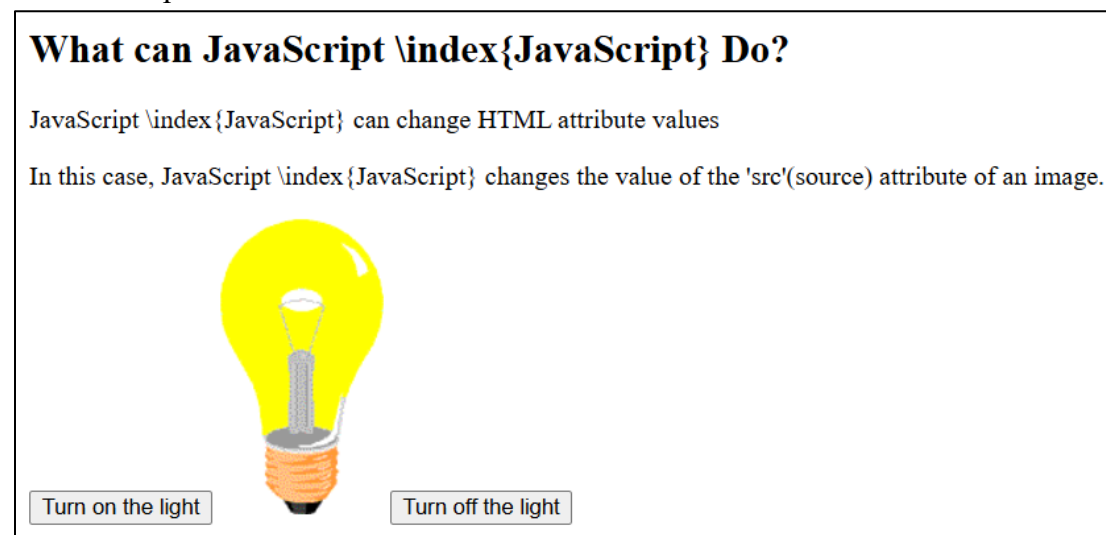


6.6 Change HTML Attribute Values

Bulb off output:



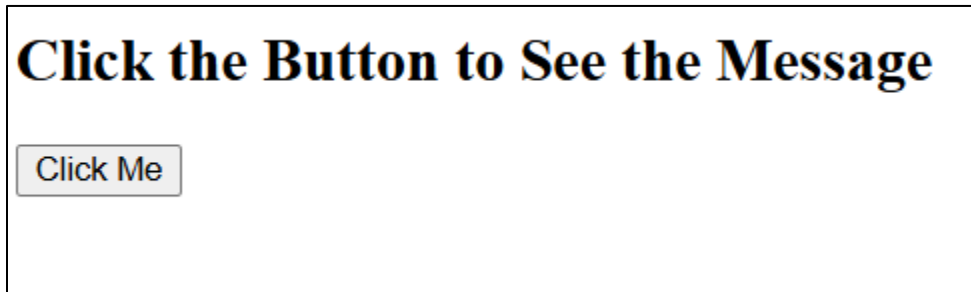
Bulb on output:



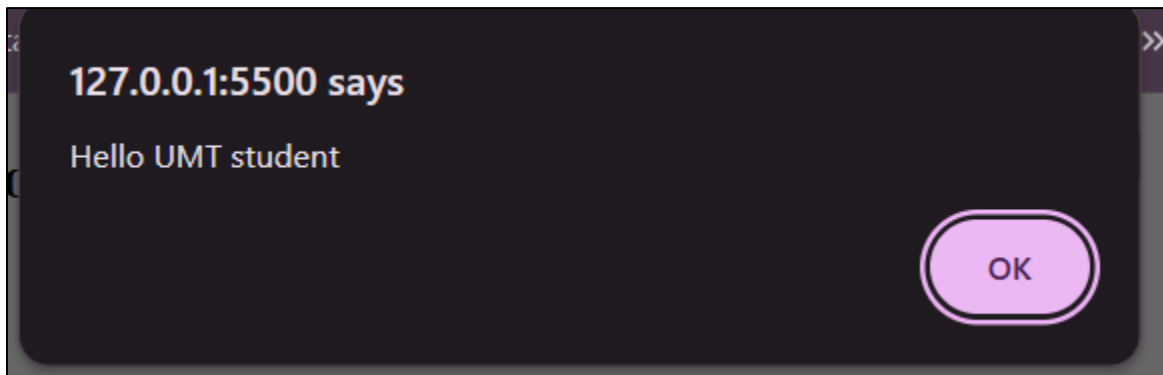
6.7 Link to file JavaScript (*.js)

6.7.3 External References

Output:

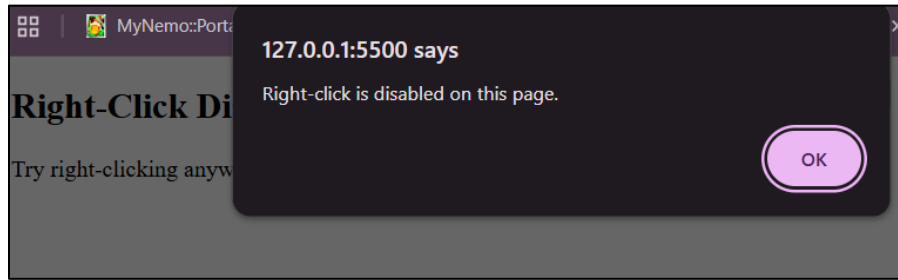


Output after clicking button:



6.8 Working with events

Output:



6.9 Multiplication Table

Output:

Multiplication Table Generator

Enter number of rows:

Enter number of columns:

Output after inserting input:

Multiplication Table Generator

Enter number of rows:

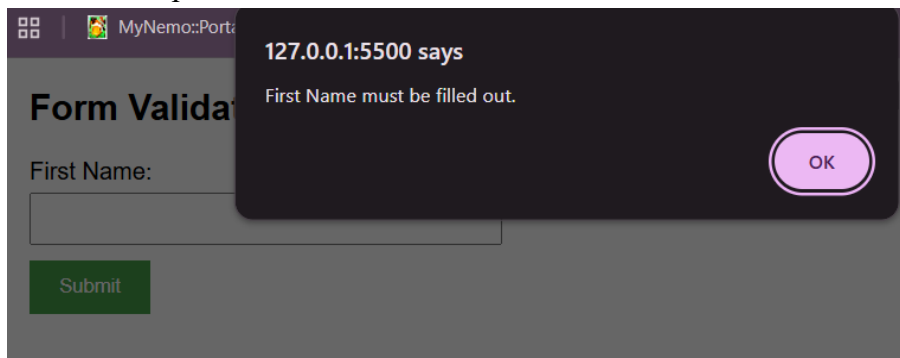
Enter number of columns:

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15
4	8	12	16	20

6.10 Client-side validation

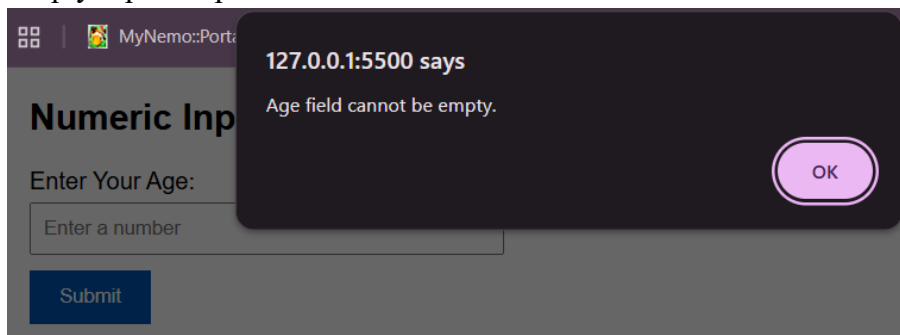
6.10.1 Form Validation

No name output:

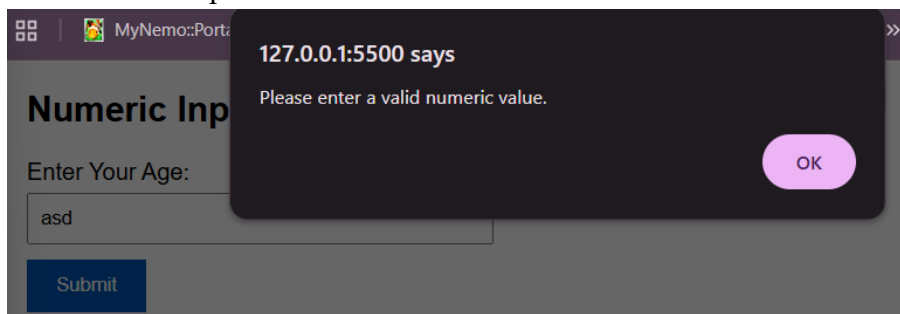


6.10.2 Numeric Input Validation

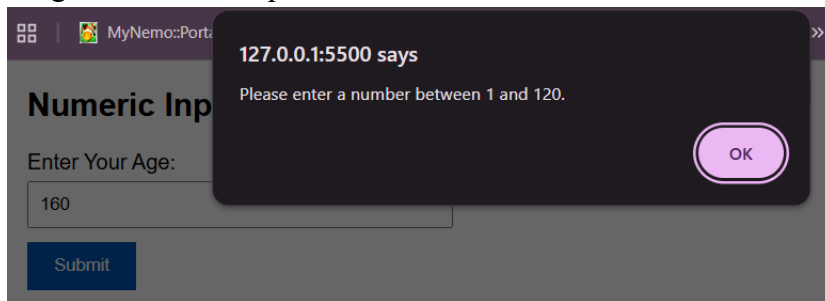
Empty input output:



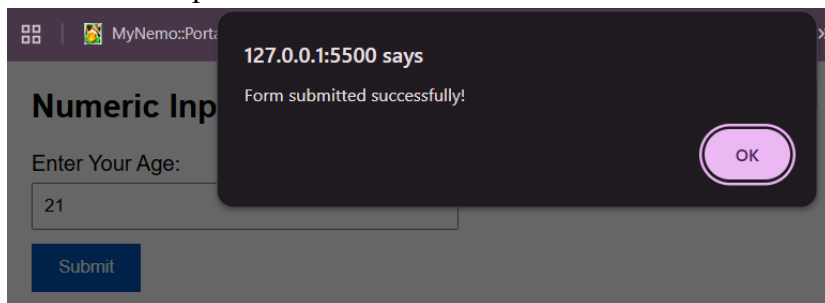
Not number output:



Illogical number output:

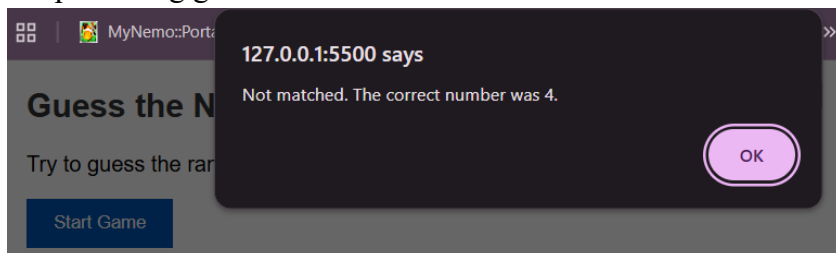


Successful output:

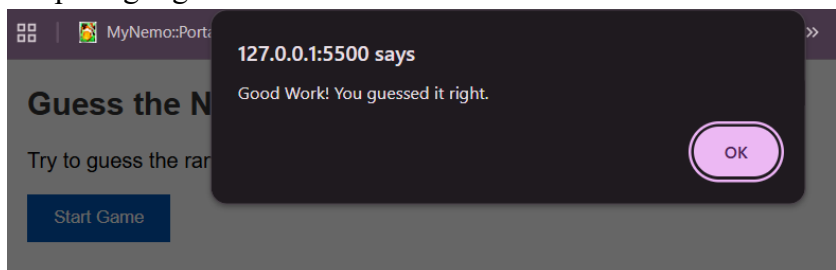


6.11 Math Function

Output wrong guess:



Output right guess:



6.12 Lab Exercise 6

Source Code:

index.html:

```
lab6 > index.html > html
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>F1 Quiz Application</title>
7    <link rel="stylesheet" type="text/css" href="style.css">
8  </head>
9  <body>
10   <header>
11     <h1>F1 Quiz Application</h1>
12     <p>Test your F1 knowledge before timer runs out!</p>
13   </header>
14   <section id="quiz-container">
15     <div id="timer">Time Left: <span id="time">10</span>s</div>
16     <div id="question-box">
17       <h2 id="question"></h2>
18       <ul id="options"></ul>
19     </div>
20     <div id="feedback"></div>
21     <button id="next-button" onclick="nextQuestion()">Next Question</button>
22   </section>
23   <footer id="result">
24     <h2>Your Score: <span id="score">0</span></h2>
25   </footer>
26   <script src="script.js"></script>
27 </body>
28 </html>
```


style.css:

```
lab6 > # style.css > footer
1  body {
2      font-family: Arial, sans-serif;
3      background: #eef2f3;
4      margin: 0;
5      padding: 0;
6      text-align: center;
7  }
8  header {
9      background: #0077b6;
10     color: white;
11     padding: 20px;
12 }
13 #quiz-container {
14     background: white;
15     width: 60%;
16     margin: 30px auto;
17     padding: 20px;
18     border-radius: 10px;
19     box-shadow: 0 0 10px #ccc;
20 }
21 #timer {
22     font-size: 20px;
23     font-weight: bold;
24     color: #ef233c;
25 }
26 #options {
27     padding: 0;
28     margin: 0;
29 }
30 #options li {
31     list-style: none;
32     background: #caf0f8;
33     margin: 10px;
34     padding: 10px;
35     cursor: pointer;
36     border-radius: 8px;
37 }
38 #options li:hover {
39     background: #90e0ef;
```

script.js:

```
1  let questions = [
2    {
3      question: "Who holds the record for the most Formula 1 World Championships?",
4      options: ["Fernando Alonso", "Lewis Hamilton", "Sebastian Vettel"],
5      answer: 1
6    },
7    {
8      question: "Which team is known for the 'Papaya Rules'?",
9      options: ["Red Bull Racing", "Ferrari", "McLaren"],
10     answer: 2
11   },
12   {
13     question: "Which race is often called the 'snooze fest' of F1?",
14     options: ["Monaco Grand Prix", "British Grand Prix", "Italian Grand Prix"],
15     answer: 0
16   },
17   {
18     question: "Where is the Silverstone Circuit located?",
19     options: ["Spain", "Italy", "United Kingdom"],
20     answer: 2
21   },
22   {
23     question: "Who won the 2021 World Driver Championship?",
24     options: ["Nicholas Goats", "Max Verstappen", "Lewis Hamilton"],
25     answer: 1
26   },
27   {
28     question: "When did Brawn GP win World Constructor Championship?",
29     options: ["2009", "2000", "2007"],
30     answer: 0
31   },
32   {
33     question: "What does DRS stand for?",
34     options: ["Downforce Reduction System", "Drag Reduction System", "Driver Response System"],
35     answer: 1
36   },
37   {
38     question: "Which team did Ayrton Senna win his three world titles with?",
39     options: ["Williams", "McLaren", "Lotus"],
40     answer: 1
41   },
42   {
43     question: "Which track is known for the famous 'Eau Rouge' corner?",
44     options: ["Spa-Francorchamps", "Suzuka", "Bahrain"],
45     answer: 0
46   },
47   {
48     question: "What country hosts the night race at Marina Bay Street Circuit?",
49     options: ["UAE", "Singapore", "Japan"],
50     answer: 1
51   }
52 ];
53 let currentQuestion = 0;
54 let score = 0;
55 let timer;
56 let timeLeft = 10;
57 function shuffleQuestions() {
58   questions.sort(() => Math.random() - 0.5);
59 }
60 function startTimer() {
61   timeLeft = 10;
62   document.getElementById("time").textContent = timeLeft;
63   timer = setInterval(() => {
64     timeLeft--;
65     document.getElementById("time").textContent = timeLeft;
66     if (timeLeft <= 0) {
67       clearInterval(timer);
68       nextQuestion();
69     }
70   }, 1000);
71 }
72 function displayQuestion() {
73   const q = questions[currentQuestion];
74   document.getElementById("question").textContent = q.question;
75   const optionsList = document.getElementById("options");
76   optionsList.innerHTML = "";
```

```

77     q.options.forEach((option, index) => {
78         const li = document.createElement("li");
79         li.textContent = option;
80         li.onclick = () => checkAnswer(index);
81         optionsList.appendChild(li);
82     });
83 }
84 function checkAnswer(selected) {
85     const correct = questions[currentQuestion].answer;
86     if (selected === correct) {
87         document.getElementById("feedback").textContent = "Correct!";
88         score++;
89         document.getElementById("score").textContent = score;
90     } else {
91         document.getElementById("feedback").textContent = "Wrong!";
92     }
93     clearInterval(timer);
94 }
95 function nextQuestion() {
96     currentQuestion++;
97     document.getElementById("feedback").textContent = "";
98     if (currentQuestion < questions.length) {
99         displayQuestion();
100         startTimer();
101     } else {
102         endQuiz();
103     }
104 }
105 function endQuiz() {
106     document.getElementById("quiz-container").innerHTML = `<h2> Quiz Completed! </h2><p>your final score is: ` + score + `</p>`;
107 }
108 function startQuiz() {
109     shuffleQuestions();
110     displayQuestion();
111     startTimer();
112 }
113 startQuiz();

```

Output:

First question page:

F1 Quiz Application

Test your F1 knowledge before timer runs out!

Time Left: 6s

Which race is often called the 'snooze fest' of F1?

Monaco Grand Prix

British Grand Prix

Italian Grand Prix

Next Question

Your Score: 0

Final score page:

F1 Quiz Application

Test your F1 knowledge before timer runs out!

❖ Quiz Completed! ❖

Your final score is: 0

Your Score: 0