



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:

Click me to display Date and Time

Mon Dec 01 2025 12:33:37 GMT+0800 (Malaysia Time)

6.6 Change HTML Attribute Values

Bulb off output:

What can JavaScript \index{JavaScript} Do?

JavaScript \index{JavaScript} can change HTML attribute values

In this case, JavaScript \index{JavaScript} changes the value of the 'src'(source) attribute of an image.



Turn on the light

Turn off the light

Bulb on output:

What can JavaScript \index{JavaScript} Do?

JavaScript \index{JavaScript} can change HTML attribute values

In this case, JavaScript \index{JavaScript} changes the value of the 'src'(source) attribute of an image.



Turn on the light

Turn off the light

6.7 Link to file JavaScript (*.js)

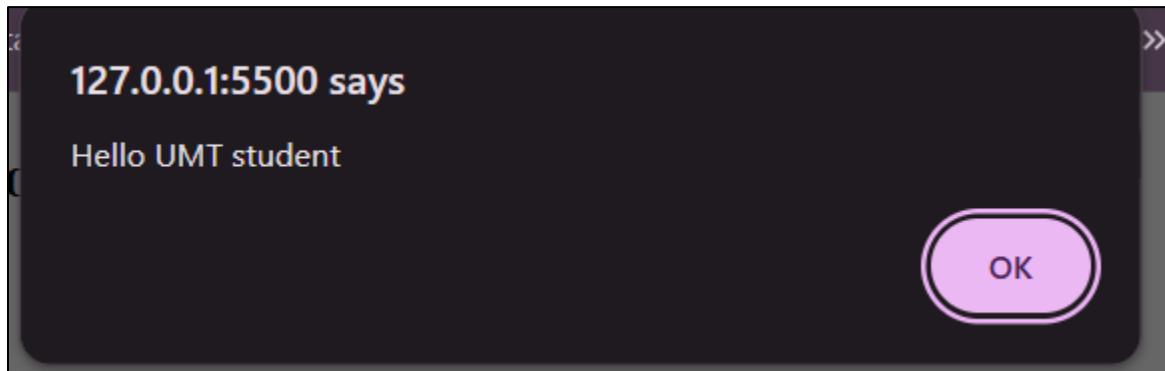
6.7.3 External References

Output:

Click the Button to See the Message

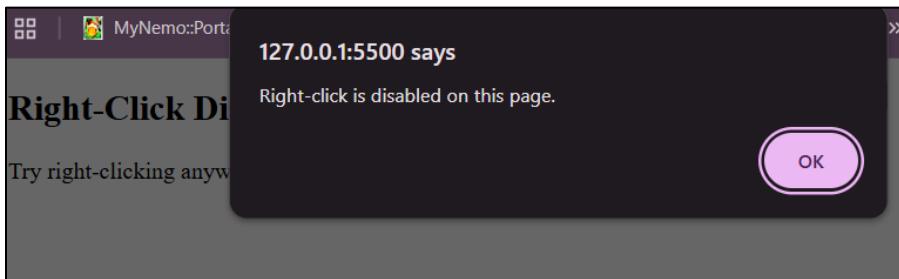
Click Me

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:

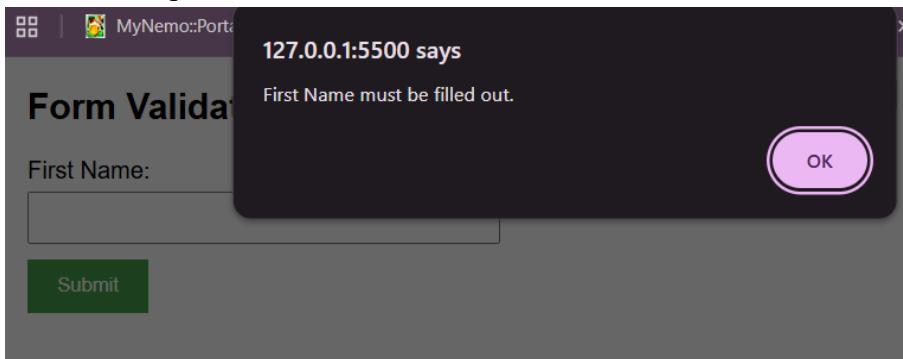
Enter number of columns:

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

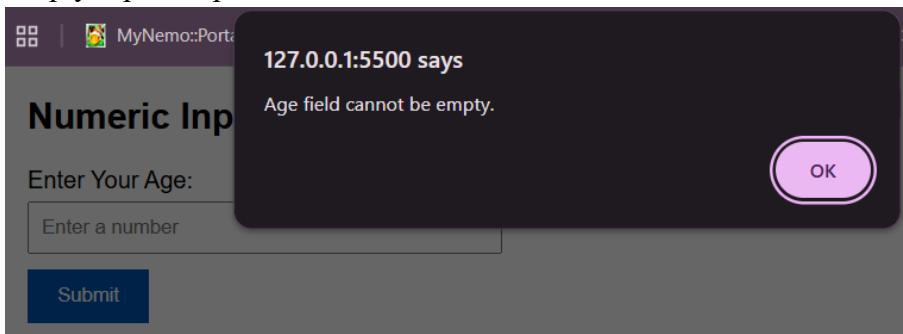
6.10.1 Form Validation

No name output:

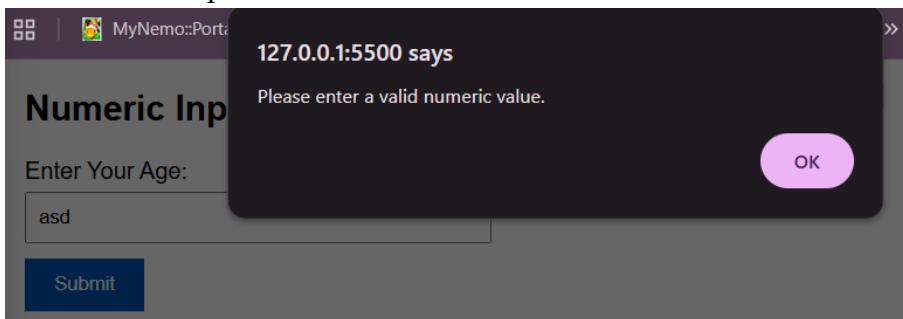


6.10.2 Numeric Input Validation

Empty input output:



Not number output:



Illogical number output:

The screenshot shows a web browser window with a title bar "MyNemo::Port". The main content area has a dark header "Numeric Input". Below it, a form asks "Enter Your Age:" with a text input field containing "160" and a "Submit" button. A modal dialog box is overlaid, displaying the message "127.0.0.1:5500 says Please enter a number between 1 and 120." with an "OK" button.

Successful output:

The screenshot shows a web browser window with a title bar "MyNemo::Port". The main content area has a dark header "Numeric Input". Below it, a form asks "Enter Your Age:" with a text input field containing "21" and a "Submit" button. A modal dialog box is overlaid, displaying the message "127.0.0.1:5500 says Form submitted successfully!" with an "OK" button.

6.11 Math Function

Output wrong guess:

The screenshot shows a web browser window with a title bar "MyNemo::Port". The main content area has a dark header "Guess the Number". Below it, a form asks "Try to guess the random number between 1 and 10" with a "Start Game" button. A modal dialog box is overlaid, displaying the message "127.0.0.1:5500 says Not matched. The correct number was 4." with an "OK" button.

Output right guess:

The screenshot shows a web browser window with a title bar "MyNemo::Port". The main content area has a dark header "Guess the Number". Below it, a form asks "Try to guess the random number between 1 and 10" with a "Start Game" button. A modal dialog box is overlaid, displaying the message "127.0.0.1:5500 says Good Work! You guessed it right." with an "OK" button.

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 Latifi", "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