



CSF3133 Web-Based Interface Design

Lab Module 6

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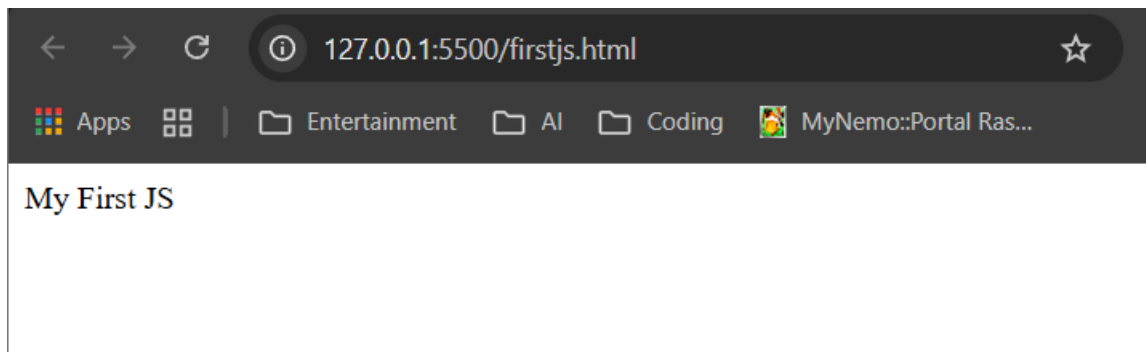
No Matrik: S75142

Kumpulan: K4

Nama Pensyarah: Assoc. Prof. Ts. Dr. Wan Nural Jawahir

Tarikh: 3/12/2025

Activity 6.3



My First JS **My First** *Java Script*

Activity 6.4

What Can JavaScript Do?

JavaScript can change HTML content.

Click Me!

What Can JavaScript Do?

Hello JavaScript!

Click Me!

Activity 6.5

Click me to display Date and Time.

Wed Dec 03 2025 11:59:38 GMT+0800 (Malaysia Time)

Activity 6.6

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

What Can JavaScript \index{JavaScript} Do?

JavaScript \index{JavaScript} can change HTML attribute values.

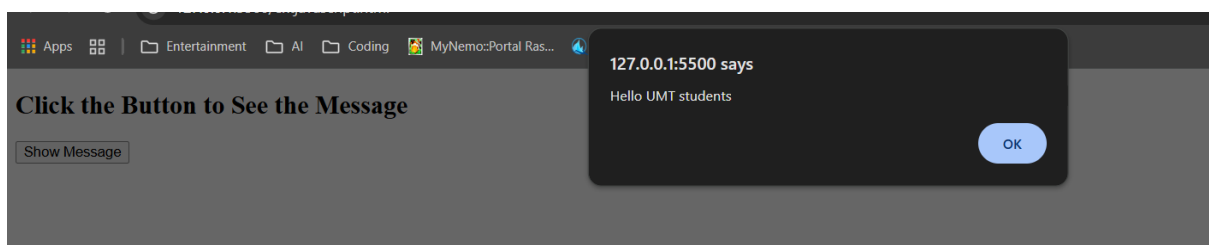
In this case, JavaScript \index{JavaScript} changes the value of the src (source) attribute of an image.



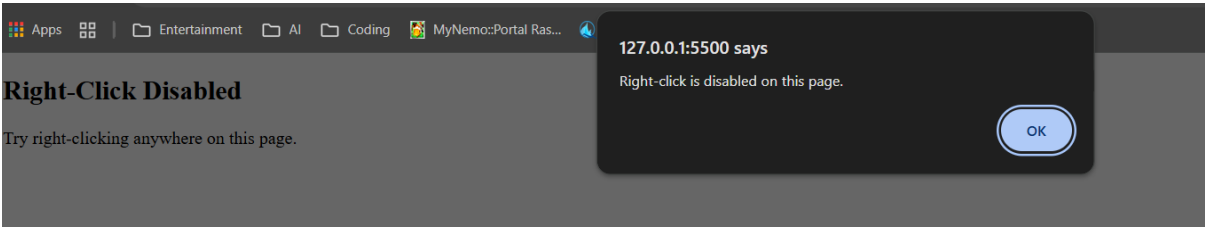
Turn on the light

Turn off the light

Activity 6.7



Activity 6.8



Activity 6.9

Multiplication Table Generator

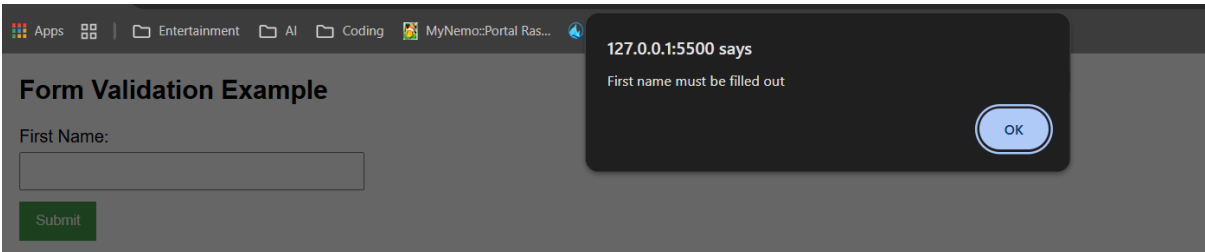
Enter number of rows:

Enter number of columns:

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15
4	8	12	16	20
5	10	15	20	25

Activity 6.10.1

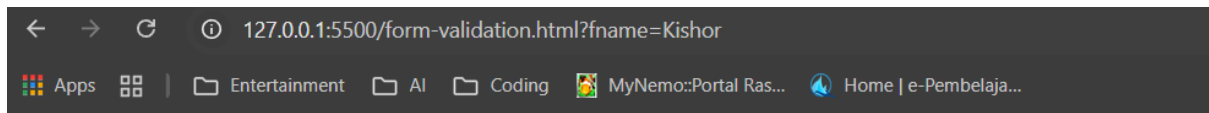
Case 1:



Case 2:

Form Validation Example

First Name:



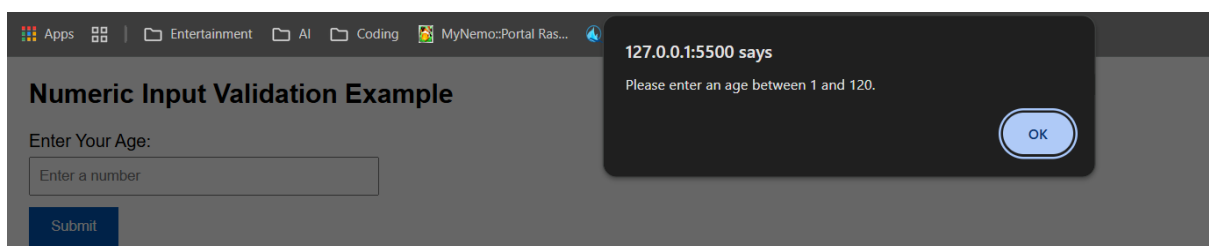
Form Validation Example

First Name:

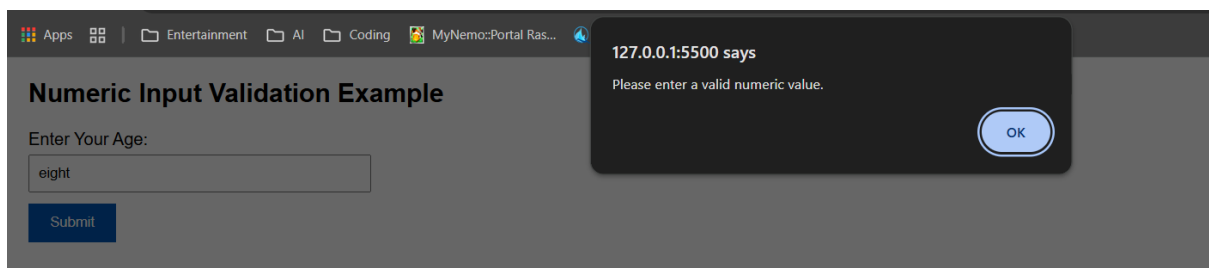
Submit

Activity 6.10.2

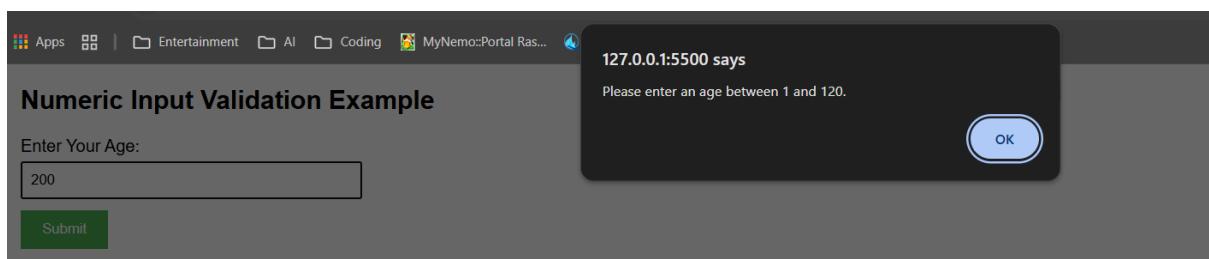
Case 1:



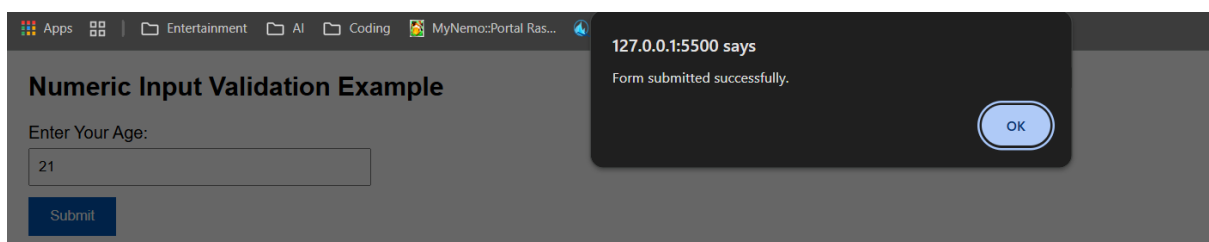
Case 2:



Case 3:



Case 4:

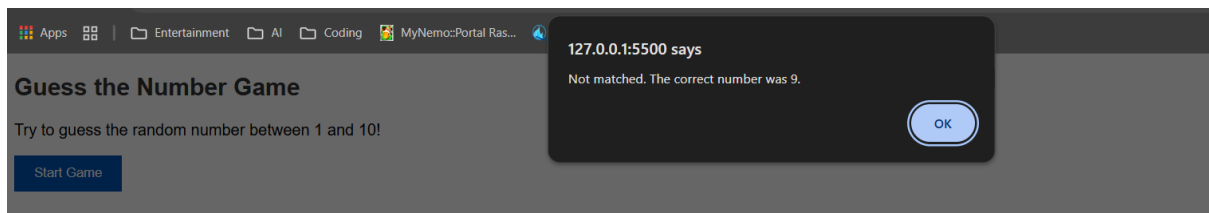
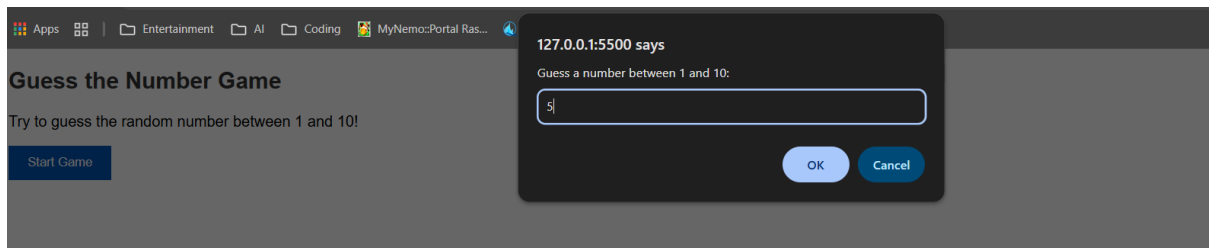


Activity 6.11

Guess the Number Game

Try to guess the random number between 1 and 10!

Start Game



Lab Exercise 6

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>Quiz Application</title>
7      <link rel="stylesheet" href="style.css">
8  </head>
9  <body>
10     <header>
11         <h1>Welcome to the Quiz Application</h1>
12         <p>Test your knowledge with these questions!</p>
13     </header>
14
15     <main>
16         <div id="timer-container">
17             <span>Time Left: </span>
18             <span id="timer">20</span>
19             <span> seconds</span>
20         </div>
21
22         <section id="quiz-section">
23             <h2 id="question-text">Question will appear here</h2>
24             <div id="answer-options">
25                 <!-- Answer options will be dynamically generated here -->
26             </div>
27         </section>
28
29         <section id="feedback-section">
30             <p id="feedback-message"></p>
31         </section>
32
33         <div id="controls">
34             <button id="submit-answer">Submit Answer</button>
35             <button id="next-question" style="display: none;">Next Question</button>
36         </div>
37     </main>
38
39     <footer>
40         <p id="final-score" style="display: none;">Your final score: 0</p>
41     </footer>
42
43     <script src="script.js"></script>
44 </body>
45 </html>
```

CSS:

```
1  body {
2      font-family: Arial, sans-serif;
3      background: #eef2f3;
4      margin: 0;
5      padding: 0;
6  }
7
8  header {
9      background: #0077cc;
10     color: white;
11     padding: 25px;
12     text-align: center;
13 }
14
15 header h1 {
16     font-size: 30px;
17     margin-bottom: 5px;
18 }
19
20 main {
21     width: 90%;
22     max-width: 700px;
23     margin: 30px auto;
24     padding: 25px;
25     background: white;
26     border-radius: 12px;
27     box-shadow: 0 4px 15px rgba(0, 0, 0, 0.1);
28 }
29
30 #timer-container {
31     font-size: 20px;
32     font-weight: bold;
33     margin-bottom: 20px;
34     text-align: right;
35     color: #333;
36 }
37
38 #quiz-section {
39     margin-bottom: 20px;
40 }
41
42 #quiz-section h2 {
43     font-size: 22px;
44     margin-bottom: 20px;
45 }
46
47 #answer-options {
48     display: flex;
49     flex-direction: column;
50     gap: 12px;
51 }
52
53 .answer-btn {
54     background: #f3f3f3;
55     padding: 14px;
56     border: 2px solid #ddd;
57     border-radius: 8px;
58     cursor: pointer;
59     font-size: 16px;
60     transition: 0.2s ease;
61 }
62
63 .answer-btn:hover {
64     background: #dceafc;
65 }
66
67 #feedback-section {
68     margin: 20px 0;
69     font-size: 18px;
70     font-weight: bold;
71     min-height: 30px;
72 }
73
74 #controls {
75     display: flex;
76     justify-content: center;
77     gap: 15px;
78 }
79
80 #controls button {
81     padding: 12px 25px;
82     background: #28a745;
83     border: none;
84     color: white;
85     font-size: 16px;
86     border-radius: 8px;
87     cursor: pointer;
88     transition: 0.2s;
89 }
90
91 #controls button:hover {
92     background: #208838;
93 }
94
95 #next-question {
96     background: #17a2b8;
97 }
98
99 #next-question:hover {
100     background: #138496;
101 }
102
103 footer {
104     margin-top: 25px;
105     padding: 15px;
106     text-align: center;
107     background: #222;
108     color: white;
109 }
110
111 #final-score {
112     font-size: 22px;
113     font-weight: bold;
114 }
```


JavaScript:

```
1 let questions = [
2   {
3     question: "What is the capital of Japan?",
4     options: ["Seoul", "Tokyo", "Beijing", "Bangkok"],
5     answer: "Tokyo",
6   },
7   {
8     question: "Which gas do plants absorb?",
9     options: ["Oxygen", "Carbon Dioxide", "Nitrogen", "Helium"],
10    answer: "Carbon Dioxide",
11  },
12  {
13    question: "What is 10 + 5?",
14    options: ["12", "13", "14", "15"],
15    answer: "15",
16  },
17  {
18    question: "Which planet is known as the Blue Planet?",
19    options: ["Earth", "Neptune", "Mars", "Venus"],
20    answer: "Earth",
21  },
22 ];
23
24 let currentIndex = 0;
25 let score = 0;
26 let timer;
27 let timeLeft = 20;
28 let selectedAnswer = null;
29
30 const questionText = document.getElementById("question-text");
31 const answerOptions = document.getElementById("answer-options");
32 const feedback = document.getElementById("feedback-message");
33 const timerDisplay = document.getElementById("timer");
34 const submitBtn = document.getElementById("submit-answer");
35 const nextBtn = document.getElementById("next-question");
36 const finalScore = document.getElementById("final-score");
37
38 function shuffleQuestions() {
39   for (let i = questions.length - 1; i > 0; i--) {
40     const j = Math.floor(Math.random() * (i + 1));
41     [questions[i], questions[j]] = [questions[j], questions[i]];
42   }
43 }
44
45 function startTimer() {
46   timeLeft = 20;
47   timerDisplay.textContent = timeLeft;
48
49   timer = setInterval(() => {
50     timeLeft--;
51     timerDisplay.textContent = timeLeft;
52
53     if (timeLeft <= 0) {
54       clearInterval(timer);
55       feedback.textContent = "Time's up!";
56       feedback.style.color = "red";
57       submitBtn.style.display = "none";
58       nextBtn.style.display = "inline-block";
59     }
60   }, 1000);
61 }
62
63 function displayQuestion() {
64   selectedAnswer = null;
65   feedback.textContent = "";
66   submitBtn.style.display = "inline-block";
67   nextBtn.style.display = "none";
68
69   clearInterval(timer);
70   startTimer();
71
72   let q = questions[currentIndex];
73   questionText.textContent = q.question;
74
75   answerOptions.innerHTML = "";
76   q.options.forEach(option => {
77     const btn = document.createElement("button");
78     btn.textContent = option;
79     btn.classList.add("answer-btn");
80
81     btn.onclick = () => selectAnswer(btn, option);
82
83     answerOptions.appendChild(btn);
84   });
85 }
86
87 function selectAnswer(button, answer) {
88   selectedAnswer = answer;
89
90   document.querySelectorAll(".answer-btn").forEach(btn => {
91     btn.style.background = "#f3f3f3";
92   });
93   button.style.background = "#cde3ff";
94 }
95
96 function checkAnswer() {
97   if (!selectedAnswer) {
98     alert("Please select an answer!");
99     return;
100  }
101
102  clearInterval(timer);
103
104  let correctAnswer = questions[currentIndex].answer;
105
106  if (selectedAnswer === correctAnswer) {
107    feedback.textContent = "Correct! ✓";
108    feedback.style.color = "green";
109    score++;
110  } else {
111    feedback.textContent = "Wrong! X Correct answer: " + correctAnswer;
112    feedback.style.color = "red";
113  }
114
115  submitBtn.style.display = "none";
116  nextBtn.style.display = "inline-block";
117 }
118
119 function nextQuestion() {
120   currentIndex++;
121
122   if (currentIndex >= questions.length) {
123     endQuiz();
124   } else {
125     displayQuestion();
126   }
127 }
128
129 function endQuiz() {
130   document.querySelector("main").style.display = "none";
131   finalScore.style.display = "block";
132   finalScore.textContent = `Your final score: ${score}/${questions.length}`;
133 }
134
135 function startQuiz() {
136   shuffleQuestions();
137   currentIndex = 0;
138   score = 0;
139
140   document.querySelector("main").style.display = "block";
141   finalScore.style.display = "none";
142   displayQuestion();
143 }
144
145 submitBtn.onclick = checkAnswer;
146 nextBtn.onclick = nextQuestion;
147
148 startQuiz();
149
150
151
```

Output:

Case 1 (Times up):

Welcome to the Quiz Application

Test your knowledge with these questions!

Time Left: 0 seconds

What is the capital of Japan?

Seoul

Tokyo

Beijing

Bangkok

Time's up!

Next Question

Case 2 (Wrong answer):

Welcome to the Quiz Application

Test your knowledge with these questions!

Time Left: 18 seconds

Which planet is known as the Blue Planet?

Earth

Neptune

Mars

Venus

Wrong! X Correct answer: Earth

Next Question

Case 3 (Correct Answer):

Welcome to the Quiz Application

Test your knowledge with these questions!

Time Left: 18 seconds

Which gas do plants absorb?

Oxygen

Carbon Dioxide

Nitrogen

Helium

Correct! ✓

Next Question

Case 4 (Summary):

Welcome to the Quiz Application

Test your knowledge with these questions!

Your final score: 2/4