



CSF3133 Web-Based Interface Design
Lab Module 6

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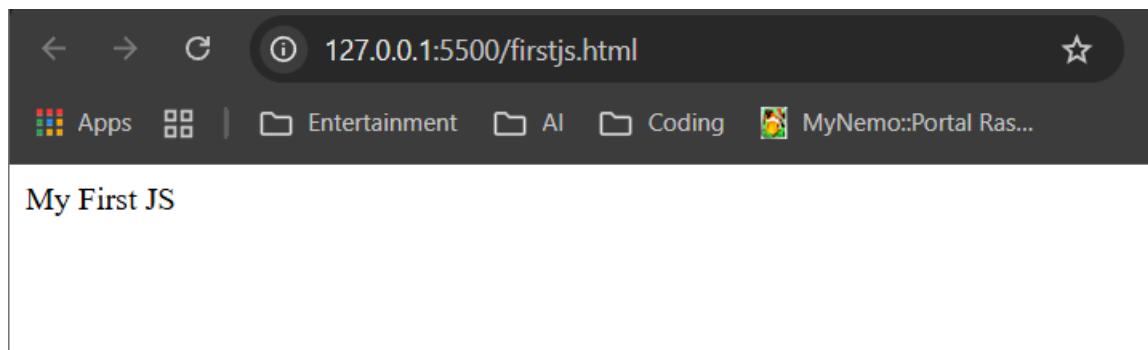
No Matrik: S75142

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.

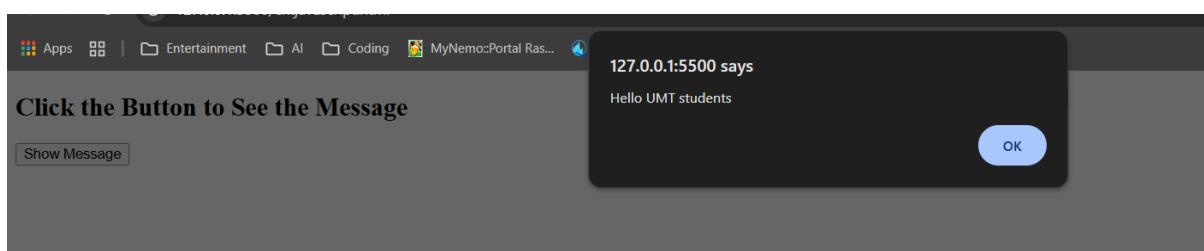
In this case, JavaScript \index{JavaScript} changes the value of the src (source) attribute of an image.



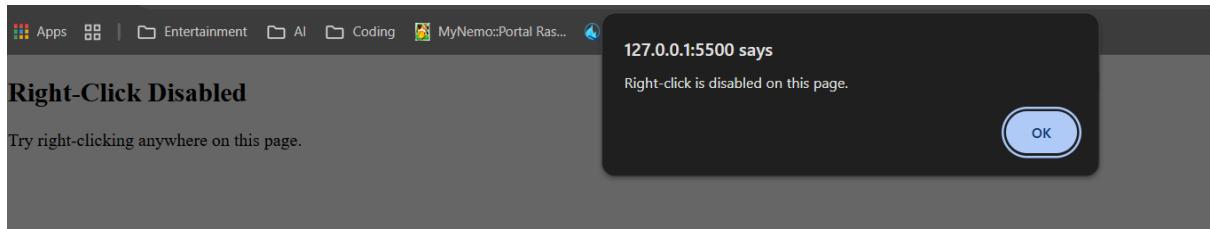
Turn on the light

Turn off the light

Activity 6.7



Activity 6.8



Activity 6.9

Multiplication Table Generator

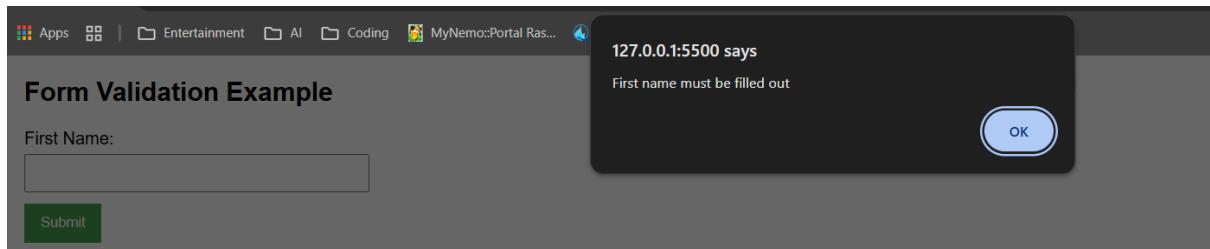
Enter number of rows:

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

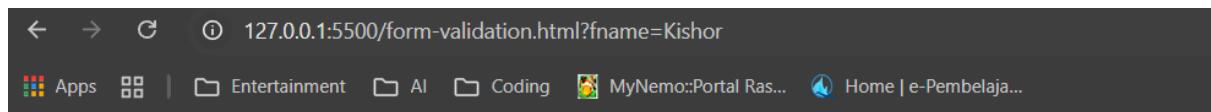
Case 1:



Case 2:

Form Validation Example

First Name:



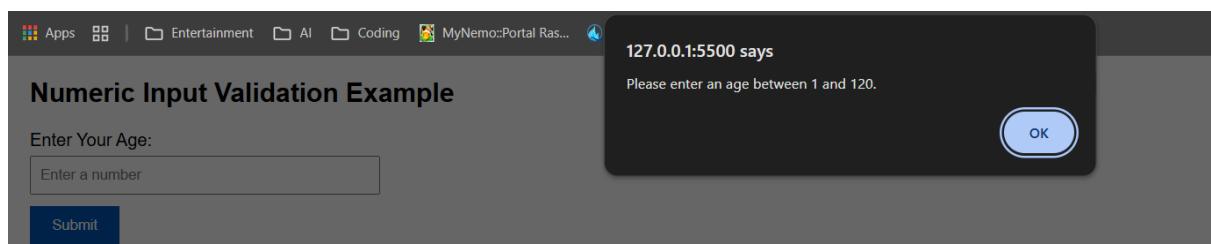
Form Validation Example

First Name:

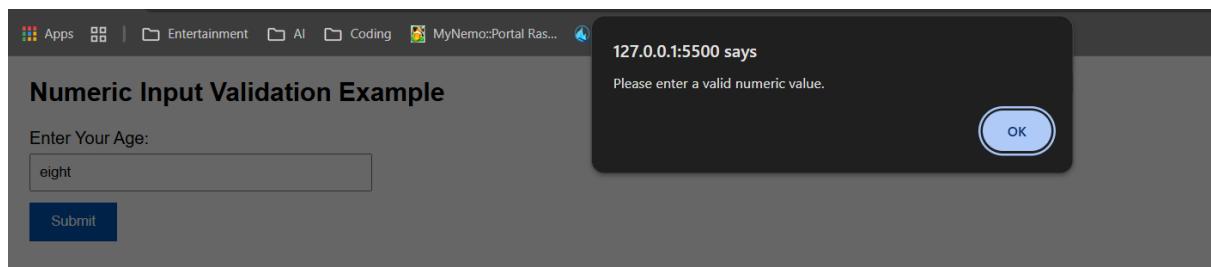
Submit

Activity 6.10.2

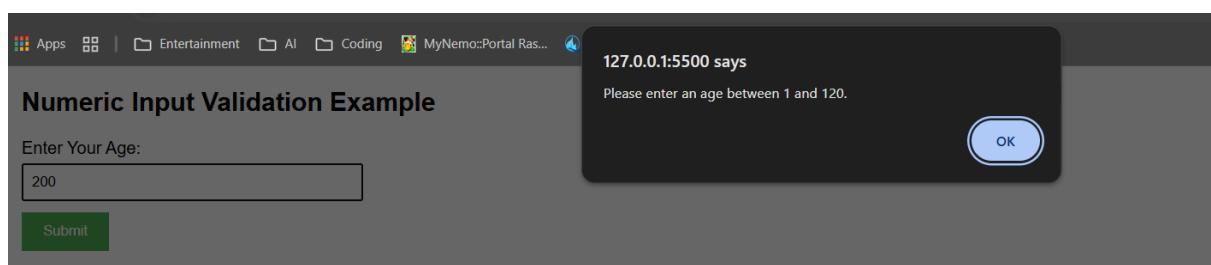
Case 1:



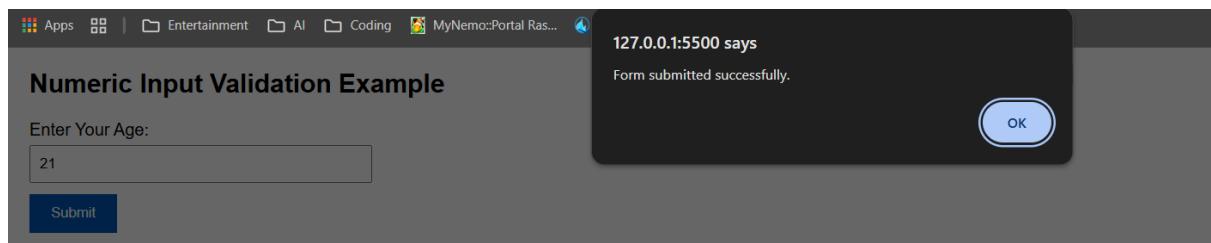
Case 2:



Case 3:



Case 4:

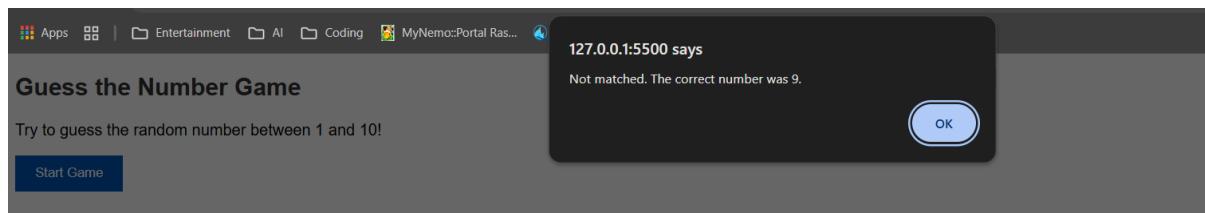
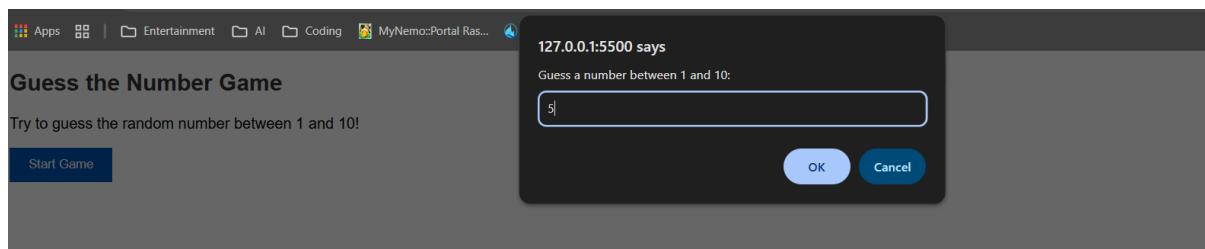


Activity 6.11

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 timeLeft = 20;
27 let selectedAnswer = null;
28
29 const questionText = document.getElementById("question-text");
30 const answerOptions = document.getElementById("answer-options");
31 const feedback = document.getElementById("feedback-message");
32 const timerDisplay = document.getElementById("timer");
33 const submitBtn = document.getElementById("submit-answer");
34 const nextBtn = document.getElementById("next-question");
35 const finalScore = document.getElementById("final-score");
36
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
64 function displayQuestion() {
65   selectedAnswer = null;
66   feedback.textContent = "";
67   submitBtn.style.display = "inline-block";
68   nextBtn.style.display = "none";
69
70   clearInterval(timer);
71   startTimer();
72
73   let q = questions[currentIndex];
74   questionText.textContent = q.question;
75
76   answerOptions.innerHTML = "";
77   q.options.forEach((option) => {
78     const btn = document.createElement("button");
79     btn.textContent = option;
80     btn.classList.add("answer-btn");
81
82     btn.onclick = () => selectAnswer(btn, option);
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
94   button.style.background = "#cde3ff";
95 }
96
97 function checkAnswer() {
98   if (!selectedAnswer) {
99     alert("Please select an answer!");
100    return;
101  }
102
103  clearInterval(timer);
104
105  let correctAnswer = questions[currentIndex].answer;
106
107  if (selectedAnswer === correctAnswer) {
108    feedback.textContent = "Correct! ✓";
109    feedback.style.color = "green";
110    score++;
111  } else {
112    feedback.textContent = "Wrong! X Correct answer: " + correctAnswer;
113    feedback.style.color = "red";
114  }
115
116  submitBtn.style.display = "none";
117  nextBtn.style.display = "inline-block";
118 }
119
120 function nextQuestion() {
121   currentIndex++;
122
123   if (currentIndex >= questions.length) {
124     endQuiz();
125   } else {
126     displayQuestion();
127   }
128 }
129
130 function endQuiz() {
131   document.querySelector("main").style.display = "none";
132   finalScore.style.display = "block";
133   finalScore.textContent = `Your final score: ${score}/${questions.length}`;
134 }
135
136 function startQuiz() {
137   shuffleQuestions();
138   currentIndex = 0;
139   score = 0;
140
141   document.querySelector("main").style.display = "block";
142   finalScore.style.display = "none";
143
144   displayQuestion();
145 }
146
147 submitBtn.onclick = checkAnswer;
148 nextBtn.onclick = nextQuestion;
149
150 startQuiz();
```

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