



Web-based Interface Design **(CSF3133)**

LAB MODULE 6

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Programme: Computer Science (Software Engineering)

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 11:42:59 GMT+0800 (Malaysia Time)

Click me to display Date and Time

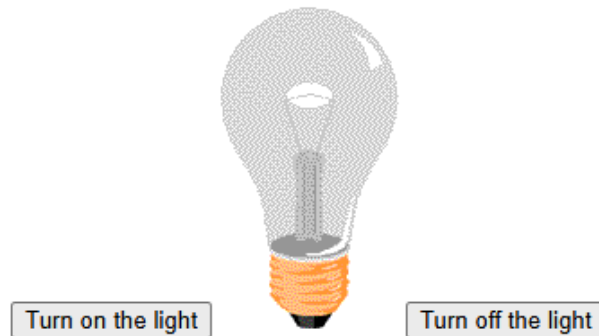
Wed Dec 03 2025 11:48:15 GMT+0800 (Malaysia Time)

Activity 6.6

What Can JavaScript `\index{JavaScript}` Do?

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

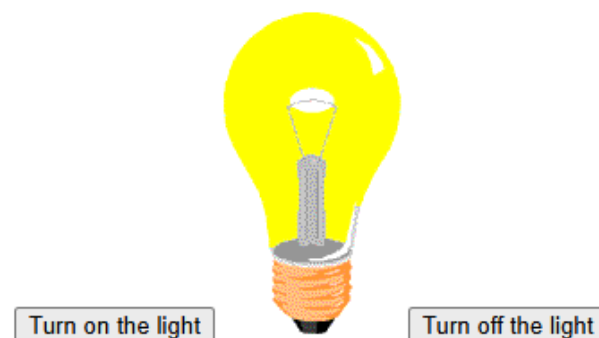
In this case, JavaScript `\index{JavaScript}` changes the value of the `'src'` (source) attribute of an image.



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.



Activity 6.7

Click the Button to See the Message

Click Me

127.0.0.1:5500 says
Hello UMT student
OK

Activity 6.8

Right-Click Disabled

Try right-clicking anywhere on this page.

127.0.0.1:5500 says
Right-click is disabled on this page.
OK

Activity 6.9

Multiplication Table Generator

Enter number of rows: 5

Enter number of columns: 5

Generate Table

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

Form Validation Example

First Name:

Submit

127.0.0.1:5500 says

First Name must be filled out.

OK

Form Validation Example

First Name:

Adly

Submit

Adly



Activity 6.10.2

Numeric Input Validation Example

Enter Your Age:

127.0.0.1:5500 says

Age field cannot be empty.

Numeric Input Validation Example

Enter Your Age:

127.0.0.1:5500 says

Please enter a valid numeric value.

Numeric Input Validation Example

Enter Your Age:

127.0.0.1:5500 says

Please enter a number between 1 and 120.

Numeric Input Validation Example

Enter Your Age:

127.0.0.1:5500 says

Form submitted successfully!

Activity 6.11

Guess the Number Game

Try to guess the random number between 1 and 10!

Start Game

127.0.0.1:5500 says

Guess a number between 1 and 10:

OK

Cancel

127.0.0.1:5500 says

Guess a number between 1 and 10:

OK

Cancel

127.0.0.1:5500 says

Please enter a valid number between 1 and 10.

OK

127.0.0.1:5500 says

Guess a number between 1 and 10:

OK

Cancel

127.0.0.1:5500 says

Not matched. The correct number was 9.

OK

127.0.0.1:5500 says

Good Work! You guessed it right.

OK

Lab Exercise

Index.html

```
<> 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>Math Quiz</title>
7      <link rel="stylesheet" href="style.css">
8  </head>
9  <body>
10     <div class="container">
11         <h1>Math Quiz</h1>
12
13         <div class="info">
14             <p>Question: <span id="current">1</span>/5</p>
15             <p>Time: <span id="timer">30</span>s</p>
16             <p>Score: <span id="score">0</span></p>
17         </div>
18
19         <div class="question" id="question">
20         </div>
21
22         <div class="options" id="options">
23         </div>
24
25         <div class="feedback" id="feedback">
26         </div>
27
28         <button id="next" class="btn">Start Quiz</button>
29     </div>
30
31     <script src="script.js"></script>
32 </body>
33 </html>
```

style.css

```
# style.css > ...
1  body {
2      font-family: Arial, sans-serif;
3      background: #f0f0f0;
4      display: flex;
5      justify-content: center;
6      align-items: center;
7      height: 100vh;
8      margin: 0;
9  }
10
11  .container {
12      background: white;
13      padding: 30px;
14      border-radius: 10px;
15      box-shadow: 0 0 10px rgba(0,0,0,0.1);
16      width: 400px;
17      text-align: center;
18  }
19
20  h1 {
21      color: #333;
22      margin-bottom: 20px;
23  }
24
25  .info {
26      display: flex;
27      justify-content: space-between;
28      margin-bottom: 20px;
29      font-weight: bold;
30  }
31
32  .question {
33      font-size: 20px;
34      margin-bottom: 20px;
35      padding: 15px;
36      background: #f8f9fa;
37      border-radius: 5px;
38  }
39
40  .options {
41      display: flex;
42      flex-direction: column;
43      gap: 10px;
44      margin-bottom: 20px;
45  }
46
```

```
47 .option {
48     padding: 12px;
49     border: 2px solid #ddd;
50     border-radius: 5px;
51     cursor: pointer;
52     background: white;
53 }
54
55 .option:hover {
56     background: #f0f0f0;
57 }
58
59 .option.selected {
60     border-color: #007bff;
61     background: #e7f3ff;
62 }
63
64 .feedback {
65     padding: 10px;
66     margin-bottom: 20px;
67     min-height: 30px;
68     font-weight: bold;
69 }
70
71 .btn {
72     background: #007bff;
73     color: white;
74     padding: 12px 30px;
75     border: none;
76     border-radius: 5px;
77     cursor: pointer;
78     font-size: 16px;
79     width: 100%;
80 }
81
82 .btn:hover {
83     background: #0056b3;
84 }
85
```

script.js

```
JS script.js > ...
1  const questions = [
2      {question: "What is 9 + 10?", options: ["21", "19", "20", "None"], correct: 1},
3      {question: "What is 5 * 2?", options: ["7", "10", "20", "5"], correct: 1},
4      {question: "What is 19 - 4?", options: ["15", "23", "10", "16"], correct: 0},
5      {question: "What is 20 / 4?", options: ["4", "16", "5", "2"], correct: 2},
6      {question: "What is 5 + 10 / 2?", options: ["15", "7.5", "7", "10"], correct: 3}
7  ];
8
9  let currentQuestionIndex = 0;
10 let score = 0;
11 let selectedAnswerIndex = null;
12 let timeLeft = 30;
13 let timerId = null;
14
15 const questionElement = document.getElementById('question');
16 const optionsElement = document.getElementById('options');
17 const currentQuestionElement = document.getElementById('current');
18 const timerElement = document.getElementById('timer');
19 const scoreElement = document.getElementById('score');
20 const feedbackElement = document.getElementById('feedback');
21 const nextButton = document.getElementById('next');
22
23 window.onload = function() {
24     questionElement.textContent = "Math Quiz";
25     feedbackElement.textContent = "Click 'Start Quiz' to start!";
26     nextButton.textContent = "Start Quiz";
27 };
28
29 function shuffleQuestions() {
30     for (let i = questions.length - 1; i > 0; i--) {
31         const j = Math.floor(Math.random() * (i + 1));
32         [questions[i], questions[j]] = [questions[j], questions[i]];
33     }
34 }
35
36 function showQuestion() {
37     if (currentQuestionIndex >= questions.length) {
38         endQuiz();
39         return;
40     }
41
42     timeLeft = 30;
43     timerElement.textContent = timeLeft;
44
45     if (timerId) {
46         clearInterval(timerId);
47     }
48
49     const currentQuestion = questions[currentQuestionIndex];
```

```

51     questionElement.textContent = currentQuestion.question;
52
53     optionsElement.innerHTML = '';
54
55     currentQuestion.options.forEach(function(option, index) {
56         const optionDiv = document.createElement('div');
57         optionDiv.className = 'option';
58         optionDiv.textContent = option;
59
60         optionDiv.onclick = function() {
61             document.querySelectorAll('.option').forEach(function(opt) {
62                 opt.classList.remove('selected');
63             });
64
65             optionDiv.classList.add('selected');
66             selectedAnswerIndex = index;
67             nextButton.disabled = false;
68
69             clearInterval(timerId);
70         };
71
72         optionsElement.appendChild(optionDiv);
73     });
74
75     currentQuestionElement.textContent = currentQuestionIndex + 1;
76
77     feedbackElement.textContent = 'Select an answer';
78     feedbackElement.style.color = 'black';
79     nextButton.disabled = true;
80     nextButton.textContent = 'Next Question';
81     selectedAnswerIndex = null;
82
83     startTimer();
84 }
85
86 function startTimer() {
87     timerId = setInterval(function() {
88         timeLeft--;
89         timerElement.textContent = timeLeft;
90
91         if (timeLeft <= 0) {
92             clearInterval(timerId);
93             feedbackElement.textContent = "Time's up!";
94             feedbackElement.style.color = 'red';
95             nextButton.disabled = false;
96         }
97     }, 1000);
98 }
99

```

```

100 function checkAnswerAndContinue() {
101     const currentQuestion = questions[currentQuestionIndex];
102
103     if (selectedAnswerIndex === currentQuestion.correct) {
104         score++;
105         scoreElement.textContent = score;
106         feedbackElement.textContent = 'Correct!';
107         feedbackElement.style.color = 'green';
108     } else {
109         feedbackElement.textContent = `Wrong! Correct: ${currentQuestion.options[currentQuestion.correct]}`;
110         feedbackElement.style.color = 'red';
111     }
112
113     setTimeout(function() {
114         currentQuestionIndex++;
115         showQuestion();
116     }, 1000);
117 }
118
119 function endQuiz() {
120     clearInterval(timerId);
121     questionElement.textContent = 'Quiz Complete!';
122     optionsElement.innerHTML = `<div style="padding: 20px; font-size: 18px;">Your score: ${score}/${questions.length}</div>`;
123     feedbackElement.textContent = 'Refresh page to play again';
124     nextButton.style.display = 'none';
125 }
126
127 nextButton.onclick = function() {
128     if (nextButton.textContent === 'Start Quiz') {
129         shuffleQuestions();
130         showQuestion();
131     } else {
132         checkAnswerAndContinue();
133     }
134 };

```

Output:

Math Quiz

Question: 1/5Time: 30sScore: 0

Math Quiz

Click 'Start Quiz' to start!

Start Quiz

Math Quiz

Question: 1/5Time: 22sScore: 0

What is $20 / 4$?

4

16

5

2

Select an answer

Next Question

Math Quiz

Question: 5/5

Time: 27s

Score: 3

What is $20 / 4$?

4

16

5

2

Correct!

Next Question

Math Quiz

Question: 1/5

Time: 12s

Score: 0

What is $20 / 4$?

4

16

5

2

Wrong! Correct: 5

Next Question

Math Quiz

Question: 3/5

Time: 0s

Score: 1

What is $9 + 10$?

21

19

20

None

Time's up!

Next Question

Math Quiz

Question: 5/5

Time: 27s

Score: 3

Quiz Complete!

Your score: 3/5

Refresh page to play again