



UNIVERSITI MALAYSIA TERENGGANU

UMT

WEB – BASED INTERFACE DESIGN

(CSF3133)

Lab Report 6

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Programme: Computer Science (Software Engineering)

LAB MODULE 6

6.3 Basic Javascript

1.

My First JS!

2.

My First Java Script

6.4 getElementById()

What Can JavaScript Do?

JavaScript can change HTML content.

Click Me!

6.5 Date and Time

1.

Click me to display date and Time

Wed Dec 03 2025 11:03:08 GMT+0800 (Malaysia Time)

2.

Click me to display date and Time

Wed Dec 03 2025 11:09:02 GMT+0800 (Malaysia Time)

6.6 Change HTML Attribute Values

What Can JavaScript \ index{JavaScript} Do?

JavaScript can change HTML attribute values.

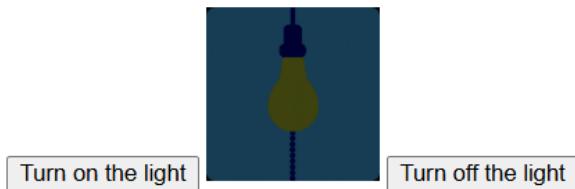
In this case, JavaScript changes the value of the src (source) attribute of an image.



What Can JavaScript \ index{JavaScript} Do?

JavaScript can change HTML attribute values.

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



6.7 CSS Backgrounds

6.7.3

Click the Button to See the Message

Click Me

This page says

Hello UMT student

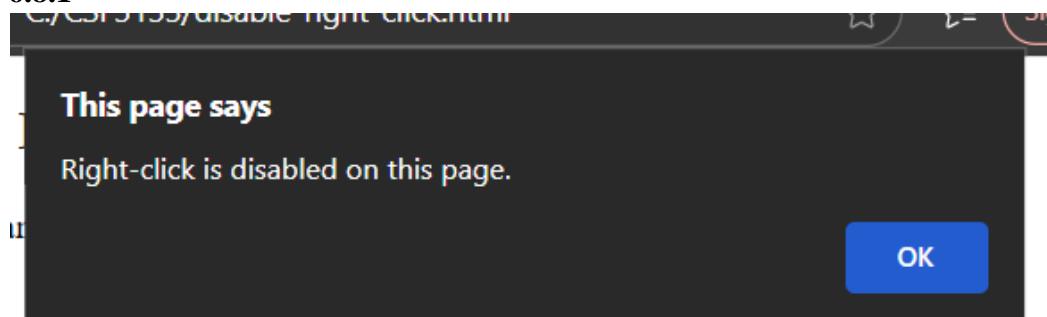
OK

6.8 Working with Events

Right-Click Disabled

Try right-clicking anywhere on this page.

6.8.1



6.9 Multiplication Table Multiplication Table Generator

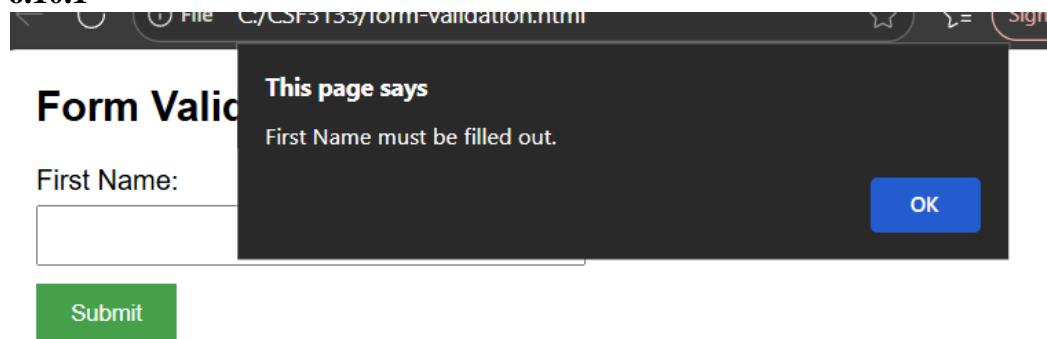
Enter number of rows:

Enter number of columns:

1	2	3	4
2	4	6	8
3	6	9	12

6.10 Client-side validation

6.10.1



Form Validation Example

First Name:

Submit

6.10.2

Numeric Input Validation Example

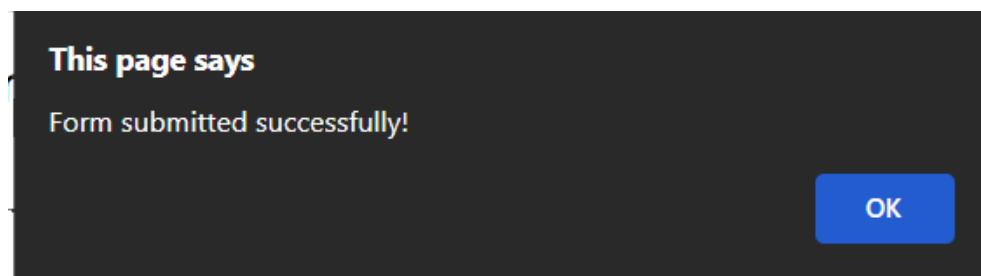
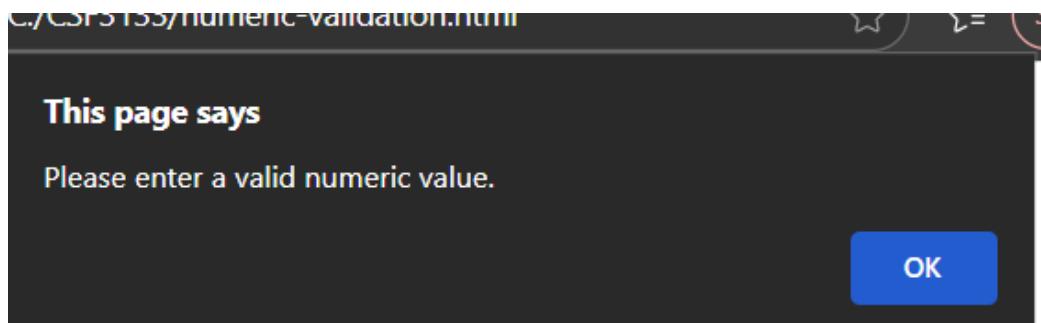
Enter Your Age:

Submit

This page says

Age field cannot be empty.

OK



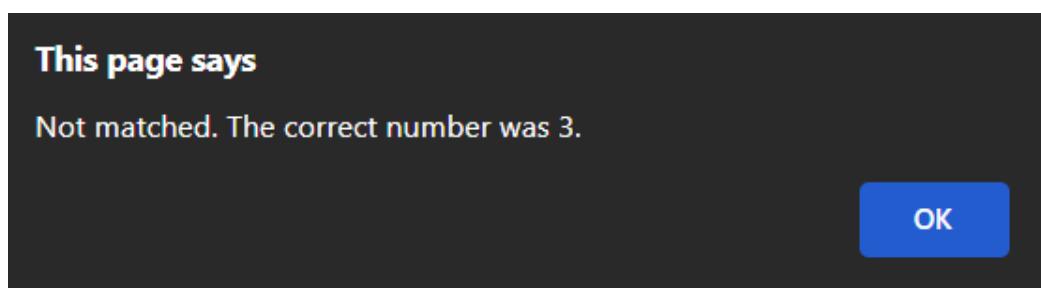
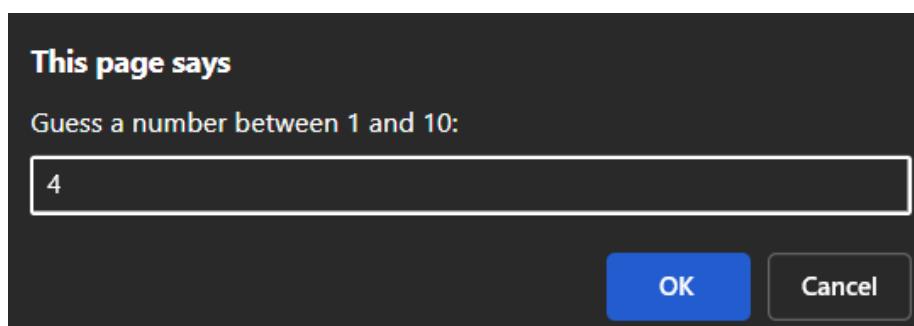
6.11 Math Function

6.11.1

Guess the Number Game

Try to guess the random number between 1 and 10!

[Start Game](#)



6.12 Lab Exercise 6

1. index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Dynamic Quiz Application</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div class="container">
        <header>
            <h1>Web Development Quiz</h1>
            <p>Test your knowledge of HTML, CSS, and JavaScript!</p>
        </header>

        <main id="quiz-app">
            <section id="question-area" class="card">
                <div id="timer-display">Time Left: <span id="timer-countdown">10</span>s</div>
                <h2 id="question-text">Click Start Quiz to begin.</h2>
                <div id="options-container">
                    <p class="placeholder-text">Press the button below to start the quiz.</p>
                </div>
            </section>

            <section id="feedback-section" class="card">
                <p id="feedback-message" aria-live="polite">&nbsp;</p>
            </section>

            <section id="controls">
                <button id="start-btn" onclick="startQuiz()">Start Quiz</button>
                <button id="submit-btn" onclick="checkAnswer()" disabled>Submit Answer</button>
                <button id="next-btn" onclick="nextQuestion()" disabled>Next Question</button>
            </section>
        </main>

        <footer>
            <p id="score-display">Current Score: 0 / 0</p>
        </footer>
    </div>
```

```
<script>
    // ===== Quiz Data =====
    const quizQuestions = [
        {
            question: "What does HTML stand for?",
            options: ["Hyper Text Markup Language", "High Tech Machine Learning", "Hot Tea Makes Life", "Home Tool Markup Language"],
            answer: 0
        },
        {
            question: "Which CSS property is used to change text color?",
            options: ["color", "background-color", "font-size", "text-decoration"],
            answer: 0
        },
        {
            question: "Which JavaScript keyword declares a variable?",
            options: ["let", "define", "various", "constant"],
            answer: 0
        }
    ];
    let currentQuestionIndex = 0;
    let score = 0;

    const questionText = document.getElementById("question-text");
    const optionsContainer = document.getElementById("options-container");
    const submitBtn = document.getElementById("submit-btn");
    const nextBtn = document.getElementById("next-btn");
    const feedbackMessage = document.getElementById("feedback-message");
    const scoreDisplay = document.getElementById("score-display");

    // ===== Functions =====
    function startQuiz() {
        currentQuestionIndex = 0;
        score = 0;
        scoreDisplay.textContent = `Current Score: ${score} / ${quizQuestions.length}`;
        feedbackMessage.textContent = "";
        showQuestion();
        submitBtn.disabled = false;
        nextBtn.disabled = true;
        document.getElementById("start-btn").disabled = true;
    }
```

```

function showQuestion() {
    const q = quizQuestions[currentQuestionIndex];
    questionText.textContent = q.question;

    optionsContainer.innerHTML = "";
    q.options.forEach((opt, index) => {
        const btn = document.createElement("button");
        btn.className = "option";
        btn.textContent = opt;
        btn.onclick = () => selectOption(index);
        optionsContainer.appendChild(btn);
    });
}

let selectedOption = null;

function selectOption(index) {
    selectedOption = index;
    // Highlight selection
    Array.from(optionsContainer.children).forEach((btn, i) => {
        btn.classList.toggle("selected", i === index);
    });
}

function checkAnswer() {
    if (selectedOption === null) {
        alert("Please select an option!");
        return;
    }
    const correctIndex = quizQuestions[currentQuestionIndex].answer;
    if (selectedOption === correctIndex) {
        feedbackMessage.textContent = "Correct!";
        feedbackMessage.className = "correct-feedback";
        score++;
    } else {
        feedbackMessage.textContent = `Incorrect! Correct answer: ${quizQuestions[currentQuestionIndex].options[correctIndex]}`;
        feedbackMessage.className = "incorrect-feedback";
    }
    scoreDisplay.textContent = `Current Score: ${score} / ${quizQuestions.length}`;
    submitBtn.disabled = true;
    nextBtn.disabled = false;
}

```

```

function nextQuestion() {
    currentQuestionIndex++;
    if (currentQuestionIndex >= quizQuestions.length) {
        questionText.textContent = "Quiz Completed!";
        optionsContainer.innerHTML = "";
        submitBtn.disabled = true;
        nextBtn.disabled = true;
        document.getElementById("start-btn").disabled = false;
        feedbackMessage.textContent = `Final Score: ${score} / ${quizQuestions.length}`;
        feedbackMessage.className = "correct-feedback";
        return;
    }
    selectedOption = null;
    feedbackMessage.textContent = "";
    showQuestion();
    submitBtn.disabled = false;
    nextBtn.disabled = true;
}
</script>
</body>
</html>

```

2. style.css

```
:root {
  --primary-color: #6f42c1;
  --secondary-color: #fff0f5;
  --text-color: #212529;
  --correct-color: #20c997;
  --incorrect-color: #fd6f6f;
  --font-family: 'Arial', sans-serif;
}

body {
  font-family: var(--font-family);
  background-color: #f0f4f8;
  margin: 0;
  padding: 20px;
  display: flex;
  justify-content: center;
  align-items: center;
  min-height: 100vh;
}

.container {
  background-color: #ffffff;
  border-radius: 12px;
  box-shadow: 0 8px 20px rgba(0, 0, 0, 0.12);
  width: 100%;
  max-width: 700px;
  padding: 30px;
  box-sizing: border-box;
}

header {
  text-align: center;
  margin-bottom: 30px;
  border-bottom: 2px solid var(--primary-color);
  padding-bottom: 15px;
}

h1 {
  color: var(--primary-color);
  margin-bottom: 5px;
}

/* Card */
.card {
  background-color: var(--secondary-color);
  padding: 20px;
  border-radius: 8px;
  margin-bottom: 20px;
  box-shadow: inset 0 0 10px rgba(0, 0, 0, 0.05);
}

/* Options Styling */
.option {
  display: block;
  background-color: #ffffff;
  padding: 14px;
  margin: 10px 0;
  border: 2px solid #dcdcdc;
  border-radius: 6px;
  cursor: pointer;
  transition: background-color 0.3s, border-color 0.3s, transform 0.2s;
}

.option:hover {
  background-color: #e6e0ff; /* Light lavender hover */
  border-color: var(--primary-color);
  transform: translateY(-2px);
}

.option.selected {
  background-color: #d9b3ff; /* Softer purple when selected */
  border-color: var(--primary-color);
}

/* Feedback Styling */
.correct-feedback {
  color: var(--correct-color);
  font-size: 1.1em;
}

.incorrect-feedback {
  color: var(--incorrect-color);
  font-size: 1.1em;
}
```

```

/* Buttons */
button {
    padding: 12px 24px;
    background-color: var(--primary-color);
    color: white;
    border: none;
    border-radius: 6px;
    cursor: pointer;
    font-size: 1em;
    flex-grow: 1;
    transition: background-color 0.3s, transform 0.2s;
}

button:hover:not([disabled]) {
    background-color: #5a32a3;
    transform: translateY(-2px);
}

button:disabled {
    background-color: #cbccf0;
    cursor: not-allowed;
}

#start-btn {
    background-color: var(--correct-color);
}

#start-btn:hover:not([disabled]) {
    background-color: #17a589;
}

/* Footer */
footer {
    text-align: right;
    border-top: 1px dashed var(--primary-color);
    padding-top: 10px;
}

#score-display {
    font-weight: bold;
    color: var(--primary-color);
}

```

3.script.js

```

// Stop any existing timer before starting a new question
function displayQuestion() {
    clearInterval(timer); // + Pastikan timer lama berhenti

    if (currentQuestionIndex < currentQuestions.length) {
        const currentQ = currentQuestions[currentQuestionIndex];

        // Reset state for new question
        selectedAnswer = null;
        isAnswerSubmitted = false;
        feedbackMessageEl.textContent = '\u00d7';
        feedbackMessageEl.className = '';
        submitBtn.disabled = true;
        nextBtn.disabled = true;

        questionTextEl.textContent = `Q${currentQuestionIndex + 1}: ${currentQ.question}`;

        optionsContainerEl.innerHTML = '';
        currentQ.options.forEach(option => {
            const button = document.createElement('button');
            button.className = 'option';
            button.textContent = option;
            button.onclick = () => selectOption(button, option);
            optionsContainerEl.appendChild(button);
        });
        startTimer(); // Start fresh timer
    } else {
        // Quiz finished
        clearInterval(timer);
        questionTextEl.textContent = "Quiz Complete!";
        optionsContainerEl.innerHTML = `

Congratulations! You finished the quiz.



Final Score: ${score} / ${currentQuestions.length}

`;
        feedbackMessageEl.textContent = 'Thank you for playing!';
        submitBtn.style.display = 'none';
        nextBtn.style.display = 'none';
        startBtn.textContent = 'Restart Quiz';
        startBtn.style.display = 'block';
    }
}

```

Output

Web Development Quiz

Test your knowledge of HTML, CSS, and JavaScript!

Time Left: 10s

What does HTML stand for?

Hyper Text Markup Language

Correct!

[Start Quiz](#)

[Submit Answer](#)

[Next Question](#)

Current Score: 1 / 3

Web Development Quiz

Test your knowledge of HTML, CSS, and JavaScript!

Time Left: 10s

Which CSS property is used to change text color?

color

Correct!

[Start Quiz](#)

[Submit Answer](#)

[Next Question](#)

Current Score: 2 / 3

Web Development Quiz

Test your knowledge of HTML, CSS, and JavaScript!

Time Left: 10s

Which JavaScript keyword declares a variable?

define

Incorrect! Correct answer: let

[Start Quiz](#)

[Submit Answer](#)

[Next Question](#)

Current Score: 2 / 3