



WEB – BASED INTERFACE DESIGN

(CSF3133)

Lab Report 6

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Date: 3 DECEMBER 2025

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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?

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6.7 CSS Backgrounds

6.7.3

Click the Button to See the Message

Click Me

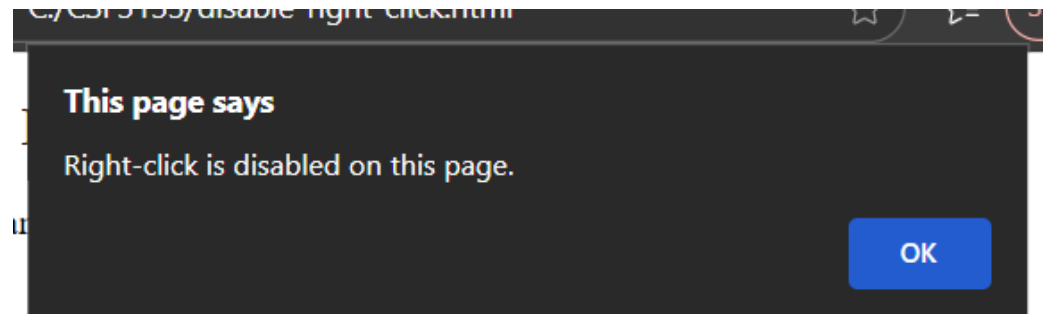


6.8 Working with Events

Right-Click Disabled

Try right-clicking anywhere on this page.

6.8.1



6.9 Multiplication Table

Multiplication Table Generator

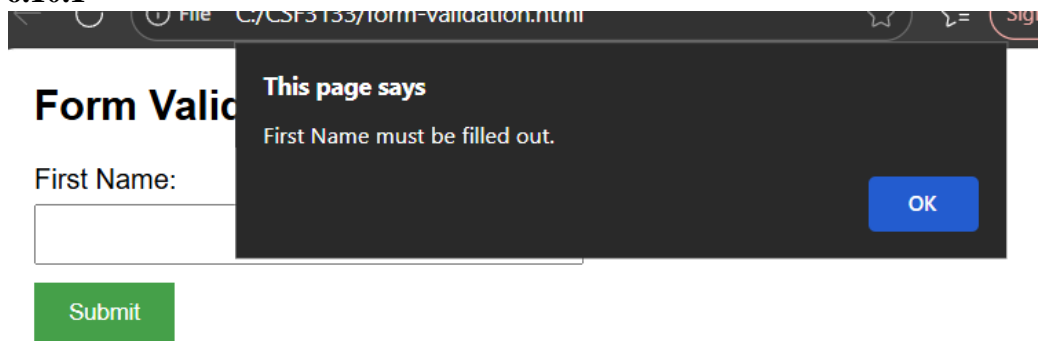
Enter number of rows:

Enter number of columns:

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

6.10 Client-side validation

6.10.1



A screenshot of a web browser window. The address bar shows the file path C:/CSF3133/form-validation.html. The page title is "Form Validation". The form has a label "First Name:" followed by an empty text input field. Below the input field is a green "Submit" button. A dark grey modal dialog box is open over the form, titled "This page says" with the message "First Name must be filled out." and an "OK" button.

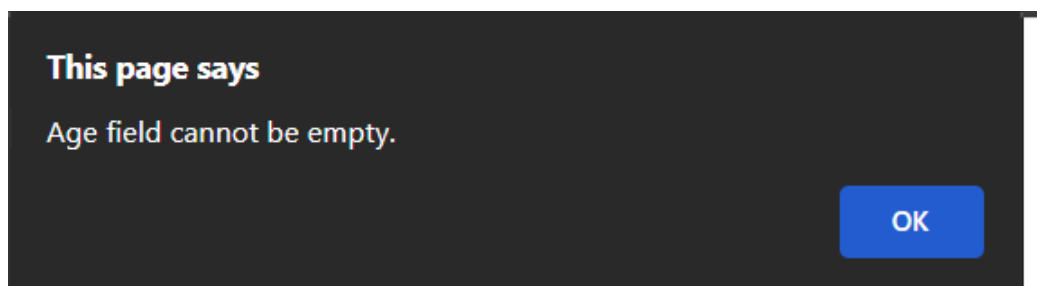
Form Validation Example

First Name:

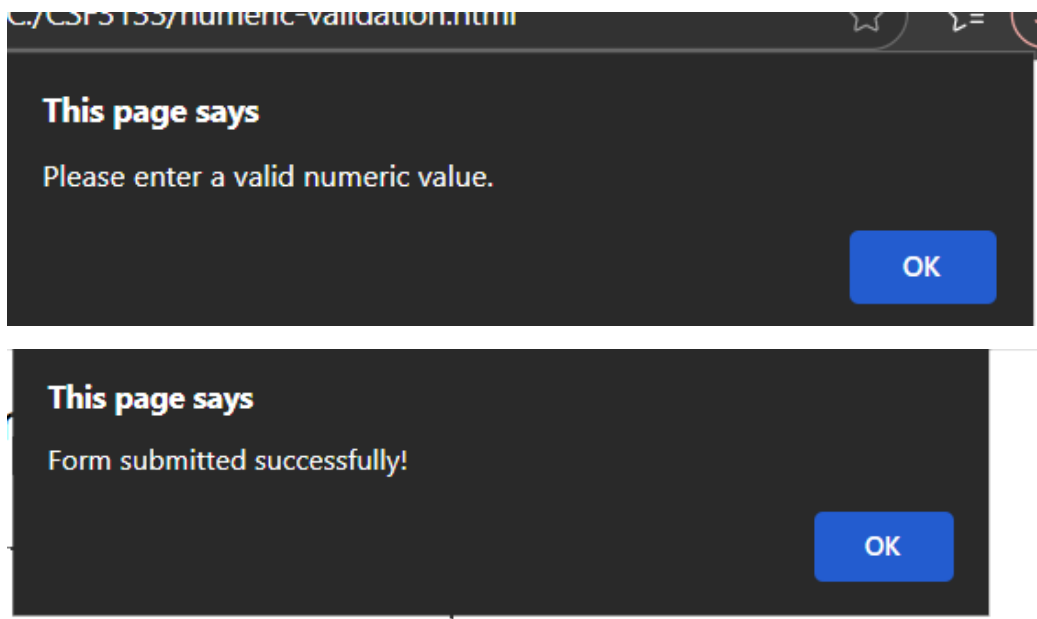
6.10.2

Numeric Input Validation Example

Enter Your Age:



A dark grey modal dialog box with the title "This page says" and the message "Age field cannot be empty." It includes an "OK" button.



6.11 Math Function

6.11.1

Guess the Number Game

Try to guess the random number between 1 and 10!

Start Game

A dark-themed dialog box titled "This page says". Below the title is the text "Guess a number between 1 and 10:". Below this text is a text input field containing the number "4". At the bottom right of the dialog are two buttons: "OK" and "Cancel".A dark-themed dialog box titled "This page says". Below the title is the text "Not matched. The correct number was 3." At the bottom right of the dialog is a single "OK" button.

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></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: #fd6666;
  --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: #cbbcf0;
  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 = '\u00A0';
    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 = `<p>Congratulations! You finished the quiz.</p><p>Final Score: ${score} / ${currentQuestions.length}</p>`;
    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!

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

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