



WEB-BASED INTERFACE DESIGN

(CSF3133)

Lab Report 6

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6.3 Basic Javascript

My First JS!

My First *Java Script*

6.4 getElementById()

Before click button:

What Can JavaScript Do?

JavaScript can change HTML content.

Click Me

After click button:

What Can JavaScript Do?

Hello JavaScript!

Click Me

6.5 Data and Time

Click me to display Date and Time

Click me to display Date and Time

Wed Dec 03 2025 08:58:44 GMT+0800 (Malaysia Time)

Click me to display Date and Time

Click me to display Date and Time

Wed Dec 03 2025 09:09:46 GMT+0800 (Malaysia Time)

6.6 Change HTML Attribute Values

Turn on 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.

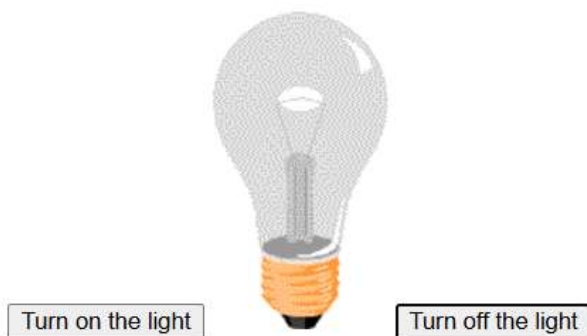


Turn off the light:

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.



6.7 Link to file JavaScript

6.7.3 External References

Click the Button to See the Message

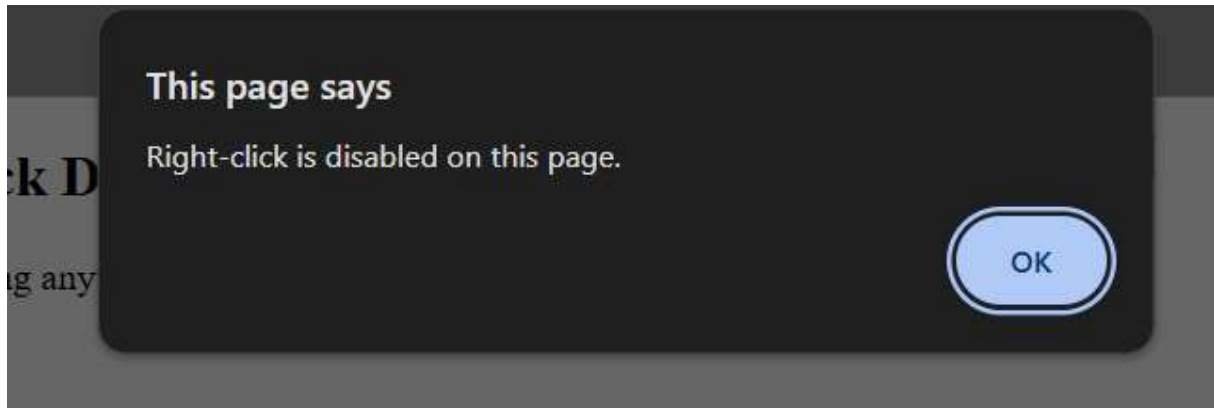
Click Me



6.8 Working with Events

Right-Click Disabled

Try right-clicking anywhere on this page.



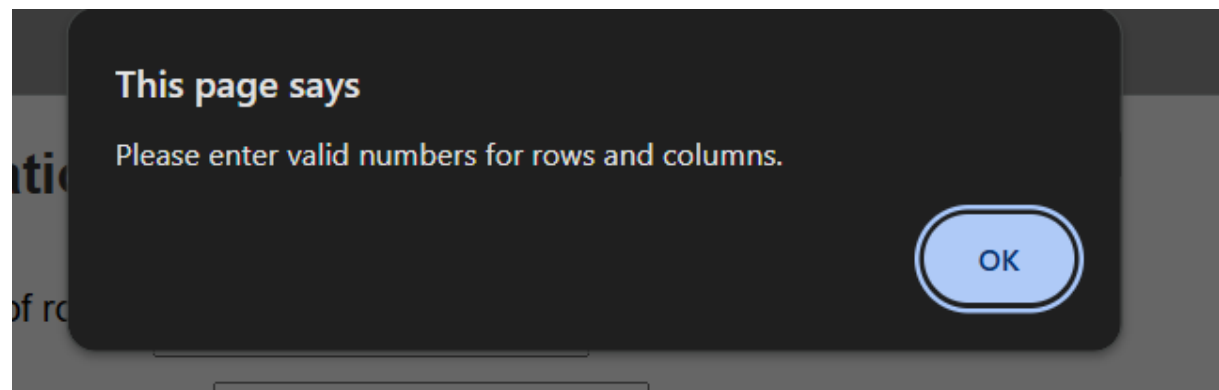
6.9 Multiplication Table

Multiplication Table Generator

Enter number of rows :

Enter number of columns :

Generate Table



Multiplication Table Generator

Enter number of rows :

Enter number of columns :

Generate Table

Multiplication Table Generator

Enter number of rows :

Enter number of columns :

Generate Table

1	2	3
2	4	6
3	6	9

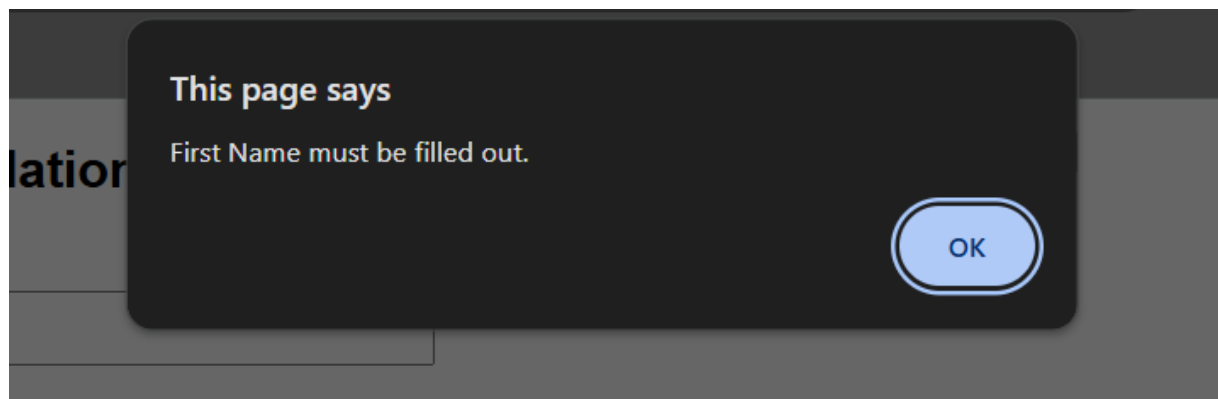
6.10 Client-side Validation

6.10.1 Form Validation

Form Validation Example

First Name:

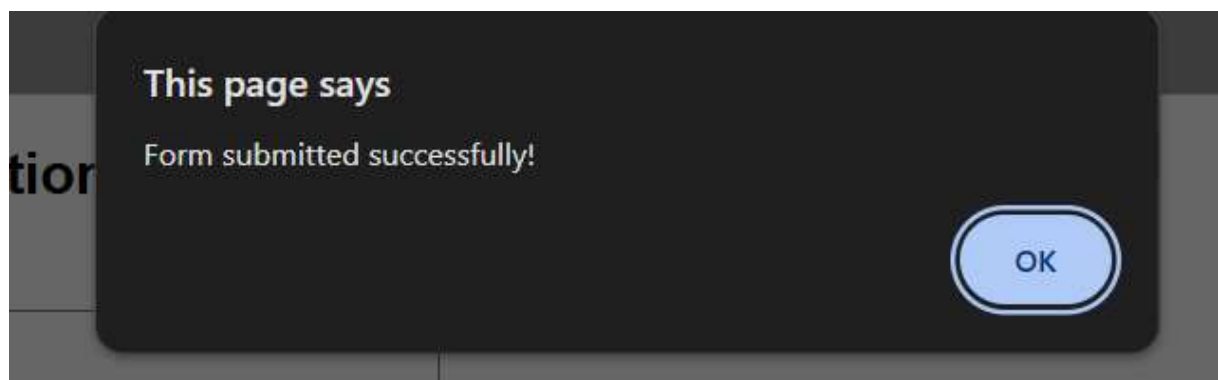
Submit



Form Validation Example

First Name:

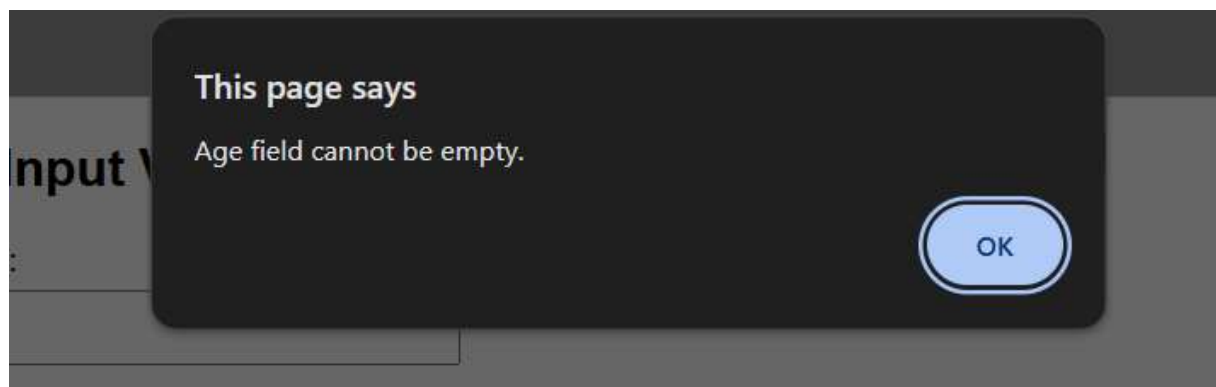
Submit



6.10.2 Numeric Input Validation

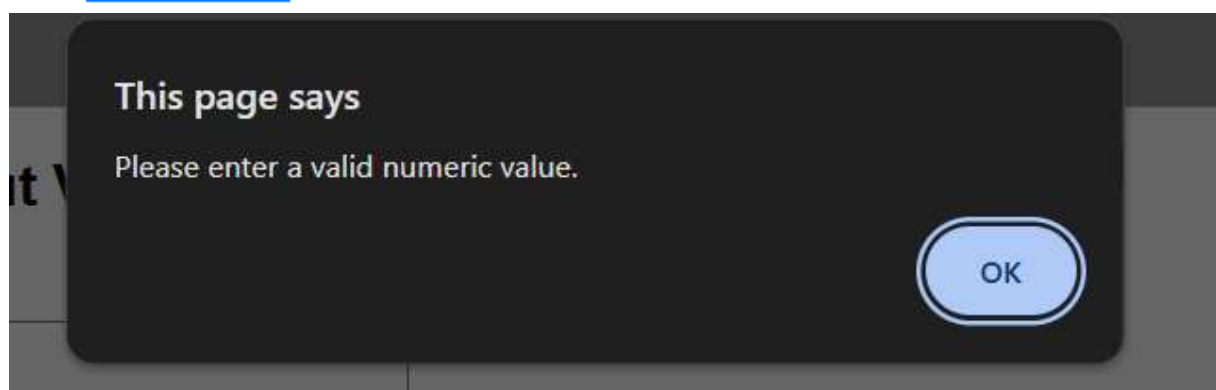
Numeric Input Validation Example

Enter Your Age:



Numeric Input Validation Example

Enter Your Age:



Numeric Input Validation Example

Enter Your Age:

Submit

This page says

Please enter a number between 1 and 120.

OK

Numeric Input Validation Example

Enter Your Age:

Submit

This page says

Form submitted successfully!

OK

6.11 Math Function

6.11.1 Guess a Number

Guess the Number Game

Try to guess the random number between 1 and 10!

Start Game

The image displays a sequence of four dialog boxes from a web application, illustrating the 'Guess the Number' game process. Each dialog box has a dark background and rounded corners.

- Dialog 1:** Titled 'This page says', it contains the instruction 'Guess a number between 1 and 10:'. Below this is a text input field containing the number '1'. At the bottom right are two buttons: 'OK' (light blue) and 'Cancel' (dark blue).
- Dialog 2:** Titled 'This page says', it displays the feedback message 'Not matched. The correct number was 8.' and a single 'OK' button (light blue) at the bottom right.
- Dialog 3:** Titled 'This page says', it contains the instruction 'Guess a number between 1 and 10:'. Below this is a text input field containing the number '2'. At the bottom right are two buttons: 'OK' (light blue) and 'Cancel' (dark blue).
- Dialog 4:** Titled 'This page says', it displays the success message 'Good Work! You guessed it right.' and a single 'OK' button (light blue) at the bottom right.

6.12 Lab Exercise 6

6.12.1 Quiz Application

index.html

```

@ web: Notepad
File Edit Format View Help
<!doctype html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Web Development Quiz</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>

<header>
  <h1>Web Development Quiz</h1>
</header>

<div id="quiz-container">

  <div id="time">Time left: <span id="time">0</span> / <span>10</span></div>

  <div id="question-container">
    <h2 id="question"></h2>
    <form id="options"></form>
  </div>

  <div id="feedback"></div>

  <button id="submit-btn">Submit Answer</button>
  <button id="next-btn" style="display:none">Next Question</button>

</body>
<script>
  <script>
  </script>
</script>
</html>

```

style.css

```

@{new Nodepad}
#m Edit Format View Help
body {
    font-family: Arial, sans-serif;
    background: linear-gradient(to bottom, #76b82a, #3498db);
    margin: 0;
    padding: 10px 50px;
    color: white;
    text-align: center;
}

header h1 {
    font-size: 20px;
    margin-bottom: 20px;
}

#quiz-container {
    background: white;
    color: #34495e;
    width: 60%;
    margin: auto;
    padding: 10px;
    border-radius: 12px;
    box-shadow: 0 0 20px rgba(0,0,0,0.2);
}

#timer {
    font-size: 20px;
    font-weight: bold;
    color: #e67e22;
}

#question {
    font-size: 20px;
    margin-bottom: 20px;
}

#options label {
    display: block;
    text-align: left;
    padding: 10px 0;
    margin: 5px 0;
    border-radius: 8px;
    background: #f1f3f4;
}

```

```

        cursor: pointer;
    }

    #options input {
        margin-right: 8px;
    }

    #button {
        margin-top: 20px;
        padding: 12px 25px;
        font-size: 18px;
        border: none;
        border-radius: 8px;
        cursor: pointer;
    }

    #submit-btn {
        background: #1e8449;
        color: white;
    }

    #reset-btn {
        background: #e67e22;
        color: white;
    }

    #feedback {
        font-size: 18px;
        margin-top: 15px;
        height: 30px;
    }

```

script.js

```

// script.js
// Run Edit Format View Help
let questions = [
    {
        question: "What does HTML stand for?",
        options: [
            "HyperText Markup Language",
            "Hyper Trainer Markup Loop",
            "HighLevel Machine Language",
            "Hyperlink and Text Management Language"
        ],
        answer: "HyperText Markup Language"
    },
    {
        question: "Which tag is used to link an external CSS file?",
        options: [
            "<style>",
            "<css>",
            "<link>",
            "<meta>"
        ],
        answer: "<link>"
    },
    {
        question: "Which CSS property controls text size?",
        options: [
            "font-weight",
            "font-size",
            "text-size",
            "text-style"
        ],
        answer: "font-size"
    },
    {
        question: "Which symbol is used for comments in JavaScript?",
        options: [
            "<!-- -->",
            "/*",
            "%%",
            "##"
        ],
        answer: "/*"
    },
    {
        question: "Where should JavaScript be placed for best performance?",
        options: [
            "Inside <head>",
            "Top of <body>",
            "Bottom of <body>",
            "Before <doctype html>"
        ],
        answer: "Bottom of <body>"
    }
]

let index = 0;
let score = 0;
let timer;
let timeleft = 15;

function shuffleQuestions() {
    questions.sort(() => Math.random() - 0.5);
}

function startTimer() {
    timeleft = 15;
    document.getElementById("time").textContent = timeleft;

    timer = setInterval(() => {
        timeleft--;
        document.getElementById("time").textContent = timeleft;

        if (timeleft <= 0) {
            clearInterval(timer);
            checkAnswer(true);
        }
    }, 1000);
}

function displayQuestion() {
    const q = questions[index];
    document.getElementById("question").textContent = q.question;

    let html = "";
    q.options.forEach(opt => {

```

```

        html += `
        <label>
        <input type="radio" name="option" value="${opt}">
        ${opt}
        </label>
        `;
    });

    document.getElementById("options").innerHTML += html;
    document.getElementById("feedback").textContent = "";
}

function checkAnswer(selected) {
    clearInterval(timer);

    const correct = questions[index].answer;

    if (selected === correct) {
        document.getElementById("feedback").textContent = "Correct!";
        document.getElementById("feedback").style.color = "green";
        score++;
    } else {
        document.getElementById("feedback").textContent = "Incorrect!";
        document.getElementById("feedback").style.color = "red";
    }

    document.getElementById("score").textContent = score;

    document.getElementById("submit-btn").style.display = "none";
    document.getElementById("next-btn").style.display = "inline-block";
}

document.getElementById("submit-btn").addEventListener("click", () => {
    let selectedOption = document.querySelector('input[name="option"]:checked');

    if (!selectedOption) {
        alert("Please select an answer!");
        return;
    }

    checkAnswer(selectedOption.value);
});

document.getElementById("next-btn").addEventListener("click", () => {
    index++;

    if (index >= questions.length) {
        alert("Quiz complete! Your score: " + score + "/" + questions.length);
        location.reload(); // Restart quiz
        return;
    }

    document.getElementById("submit-btn").style.display = "inline-block";
    document.getElementById("next-btn").style.display = "none";

    displayQuestion();
    startTimer();
});

function startQuiz() {
    shuffleQuestions();
    displayQuestion();
    startTimer();
}

startQuiz();

```

Output

Web Development Quiz

Time Left: 2s

What does HTML stand for?

☒ HyperText Markup Language

☐ Hyper Trainer Markup Loop

☐ HighText Machine Language

☐ Hyperlink and Text Management Language

Correct!

Submit Answer

Next Question

Score: 1

Web Development Quiz

Time Left: 13s

Which tag is used to link an external CSS file?

☐ <style>

☐ <css>

☒ <link>

☐ <meta>

Correct!

Submit Answer

Next Question

Score: 2

Web Development Quiz

Time Left: 12s

Which CSS property controls text size?

☐ font-weight

☒ font-size

☐ text-size

☐ text-style

Correct!

Submit Answer

Next Question

Score: 3

Web Development Quiz

Time Left: 13s

Which symbol is used for comments in JavaScript?

☐ `<!-- -->`

☒ `//`

☐ `**`

☐ `##`

Correct!

Submit Answer

Next Question

Score: 4

Web Development Quiz

Time Left: 13s

Where should JavaScript be placed for best performance?

- ☐ Inside <head>
- ☐ Top of <body>
- ☒ Bottom of <body>
- ☐ Before <!DOCTYPE html>

Correct!

Submit Answer

Next Question

Score: 5

Web Development Quiz

Quiz Completed!

Your final score is 5 / 5

Score: 5