



WEB-BASED INTERFACE DESIGN

(CSF3133)

LAB REPORT 3

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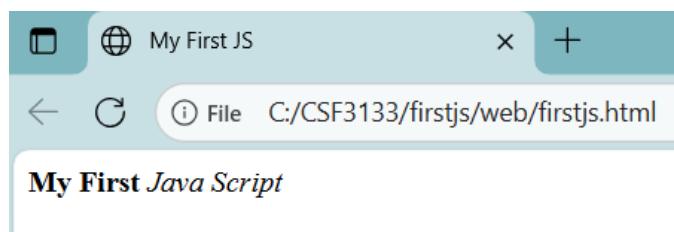
Lecturer: Dr. Wan Nural

Lab Module 6

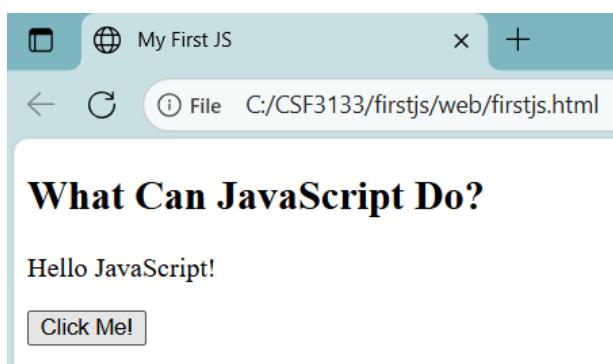
6.3 Basic Javascript



The result after changing the statement



6.4 getElementById()



6.5 Date and Time

The image contains three vertically stacked screenshots of a web browser window. Each screenshot shows a teal header bar with the text "Date and Time" and a "File" entry in the address bar pointing to "C:/CSF3133/datetimejs/web/datetimejs.html". Below the header, there is a button labeled "Click me to display Date and Time". In the first screenshot, the button is visible. In the second screenshot, the button has been clicked, and the text "Wed Dec 03 2025 10:34:03 GMT+0800 (Malaysia Time)" is displayed below it. In the third screenshot, the button has been clicked again, and the text "Wed Dec 03 2025 10:44:29 GMT+0800 (Malaysia Time)" is displayed in a yellow box.

6.6 Change HTML Attribute Values

The image shows a screenshot of a web browser window titled "Change Light". The address bar shows "localhost:8080/changelight/". The main content area features the heading "What Can JavaScript \index{JavaScript} Do?". Below the heading, a note states "JavaScript \index{JavaScript} can change HTML attribute values". Another note says "In this case, Java Script \index{JavaScript} changes the value of the 'src'(source) attribute of an image." At the bottom, there is a graphic of a light fixture with two buttons: "Turn on the light" and "Turn off the light".

What Can JavaScript \index{JavaScript} Do?

JavaScript \index{JavaScript} can change HTML attribute values

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

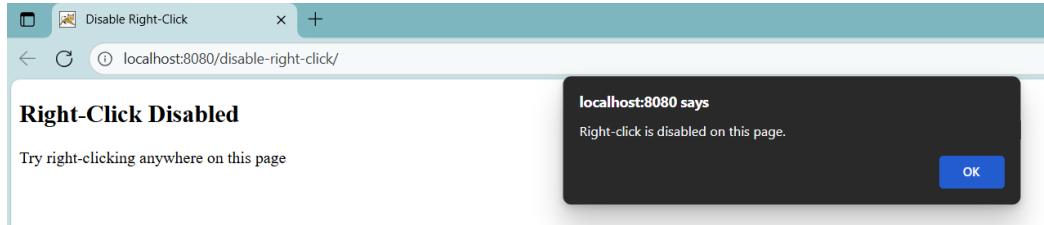


6.7 External JavaScript Advantages

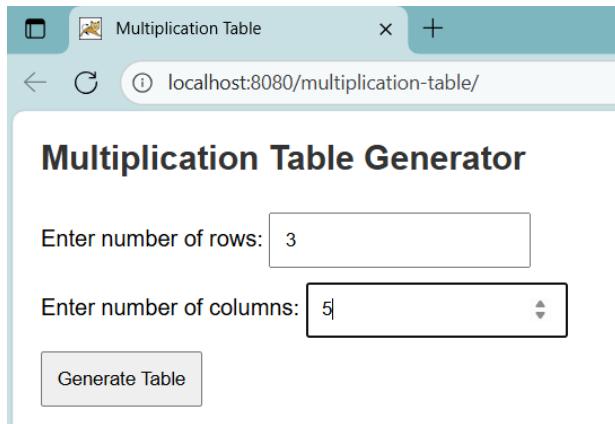
6.7.3 External References



6.8 Working with events



6.9 Multiplication Table



Multiplication Table Generator

Enter number of rows:

Enter number of columns:

Generate Table

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15

6.10 Client-side Validation

6.10.1 Form Validation

Form Validation Example

First Name:

Submit

localhost:8080 says
 First Name must be filled out.

OK

Form Validation Example

First Name:

Submit

6.10.2 Numeric Input Validation

Numeric Input Validation Example

Enter Your Age:

Submit

localhost:8080 says
 Please enter a valid numeric value.

OK

Numeric Input Validation Example

Enter Your Age:

Submit

localhost:8080 says
Please enter a number between 1 and 120.

OK

Numeric Input Validation Example

Enter Your Age:

Submit

localhost:8080 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

Guess the Number Game

Try to guess the random number between 1 and 10!

Start Game

localhost:8080 says
Guess a number between 1 and 10:

OK Cancel

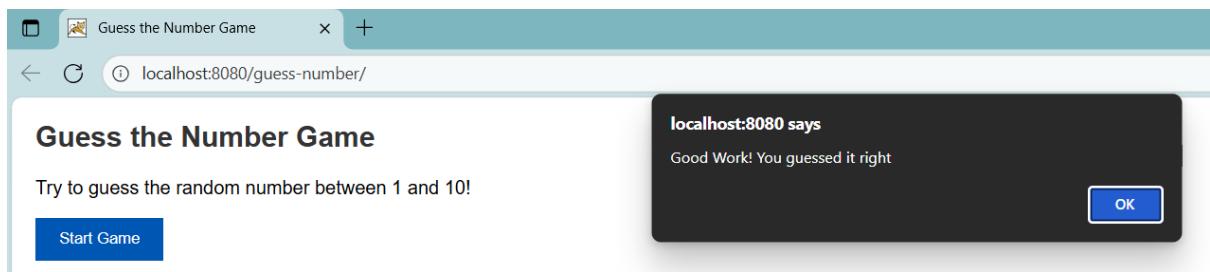
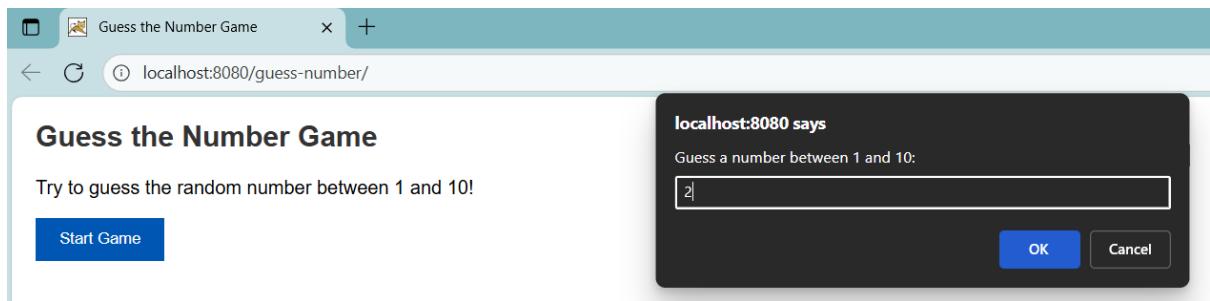
Guess the Number Game

Try to guess the random number between 1 and 10!

Start Game

localhost:8080 says
Not matched. The correct number was 2.

OK



Lab Exercise 6

Index.html

```
<!DOCTYPE html>
<!--
Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
Click nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Html1.html to edit this template
-->
<html>
    <head>
        <title>Quiz Application</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <link rel="stylesheet" href="style.css">
    </head>
    <body>

        <header>
            <h1>Quiz Application</h1>
            <p>Test your knowledge!</p>
        </header>

        <button id="startBtn" onclick="startQuiz()">Start Quiz</button>

        <section class="quiz-container">
            <div id="timer">Time Left: <span id="time">10</span> seconds</div>
            <h2 id="question">Question will appear here</h2>
        </section>

        <div class="options">
            <button class="option" onclick="checkAnswer(0)" disabled></button>
            <button class="option" onclick="checkAnswer(1)" disabled></button>
            <button class="option" onclick="checkAnswer(2)" disabled></button>
            <button class="option" onclick="checkAnswer(3)" disabled></button>
        </div>

        <p id="feedback"></p>

        <button id="nextBtn" onclick="nextQuestion()">Next Question</button>
    </section>

    <footer>
        <p id="score">Score: 0</p>
    </footer>

    <script src="script.js"></script>
</body>
</html>
```

Script.js

```
let questions = [
    {
        question: "What does HTML stand for?",
        options: ["HyperText Markup Language", "HighText Machine Language", "Hyperloop Machine Language", "None"],
        answer: 0
    },
    {
        question: "Which language styles web pages?",
        options: ["HTML", "CSS", "Java", "Python"],
        answer: 1
    },
    {
        question: "Which is used for web interactivity?",
        options: ["HTML", "CSS", "JavaScript", "PHP"],
        answer: 2
    },
    {
        question: "What symbol is used for ID in CSS?",
        options: [".", "#", "*", "&"],
        answer: 1
    }
];

let currentQuestion = 0;
let score = 0;
let time = 10;
let timer;

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

```

// Start timer
function startTimer() {
    clearInterval(timer);
    time = 10;
    document.getElementById("time").textContent = time;

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

        if (time == 0) {
            clearInterval(timer);
            showFeedback("⏰ Time is up!", "red");
            document.getElementById("nextBtn").style.display = "block";
            let buttons = document.getElementsByClassName("option");
            for (let btn of buttons) btn.disabled = true;
        }
    }, 1000);
}

// Display Question
function displayQuestion() {
    let q = questions[currentQuestion];
    document.getElementById("question").textContent = q.question;

    let buttons = document.getElementsByClassName("option");
    for (let i = 0; i < buttons.length; i++) {
        buttons[i].textContent = q.options[i];
        buttons[i].disabled = false;
    }

    document.getElementById("feedback").textContent = "";
    document.getElementById("nextBtn").style.display = "none";

    startTimer();
}

```

```

// Check answer
function checkAnswer(selected) {
    let correct = questions[currentQuestion].answer;
    let correctText = questions[currentQuestion].options[correct];
    let buttons = document.getElementsByClassName("option");

    for (let btn of buttons) btn.disabled = true;
    clearInterval(timer);

    if (selected === correct) {
        score++;
        showFeedback("✅ Correct!", "green");
    } else {
        showFeedback("❌ Wrong! The correct answer is: " + correctText, "red");
    }

    document.getElementById("score").textContent = "Score: " + score;
    document.getElementById("nextBtn").style.display = "block";
}

// Start quiz
function startQuiz() {
    currentQuestion = 0;
    score = 0;
    document.getElementById("score").textContent = "Score: 0";
    document.getElementById("startBtn").disabled = true;
    shuffleQuestions();
    displayQuestion();
}

```

```

// Next Question
function nextQuestion() {
    currentQuestion++;
    if (currentQuestion < questions.length) {
        displayQuestion();
    } else {
        endQuiz();
    }
}

// Show feedback
function showFeedback(text, color) {
    let fb = document.getElementById("feedback");
    fb.textContent = text;
    fb.style.color = color;
}

// End Quiz
function endQuiz() {
    document.querySelector(".quiz-container").innerHTML =
`<h2>Quiz Finished!</h2>
<p>Your final score is: ${score} / ${questions.length}</p>`;
}

```

Style.css

```

body {
    font-family: Arial, sans-serif;
    text-align: center;
    background-color: #bbf3fc;
}

header {
    background: #576bad;
    color: white;
    padding: 20px;
}

#startBtn {
    margin-top: 20px;
    padding: 12px 25px;
    font-size: 18px;
    background-color: #b300ff;
    color: white;
    border: none;
    border-radius: 8px;
    cursor: pointer;
}

#startBtn:hover {
    background-color: #e68900;
}

.quiz-container {
    background: white;
    width: 50%;
    margin: auto;
    padding: 20px;
    margin-top: 20px;
    border-radius: 10px;
}

```

```
.options {
    display: grid;
    grid-template-columns: auto auto;
    gap: 10px;
    margin: 15px 0;
}

.option {
    padding: 10px;
    background: #d6228e;
    color: white;
    border: none;
    cursor: pointer;
    border-radius: 5px;
}

.option:hover {
    background: #871c60;
}

#feedback {
    font-weight: bold;
    margin: 10px;
}

#nextBtn {
    padding: 10px;
    background: green;
    color: white;
    border: none;
    cursor: pointer;
    display: none;
}

#timer {
    font-size: 18px;
    color: red;
}
```

```
footer {
    margin-top: 20px;
    font-weight: bold;
}
```

Output:

