



**WEB-BASED INTERFACE DESIGN  
(CSF3133)**

**LAB REPORT 6**

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Matric : S75702

Date : 3 December 2025

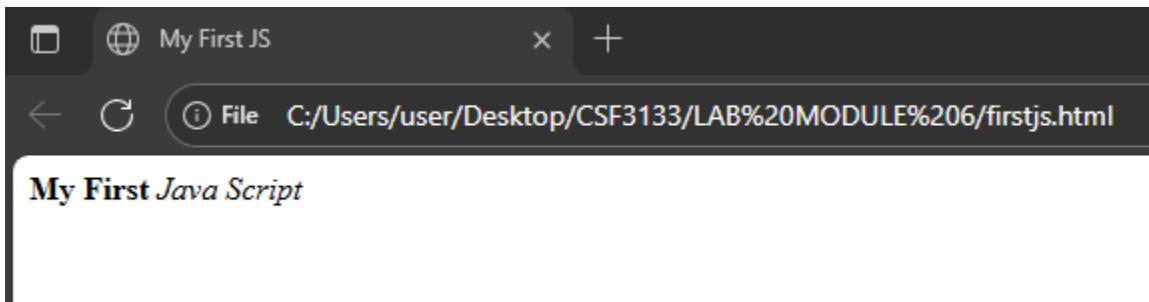
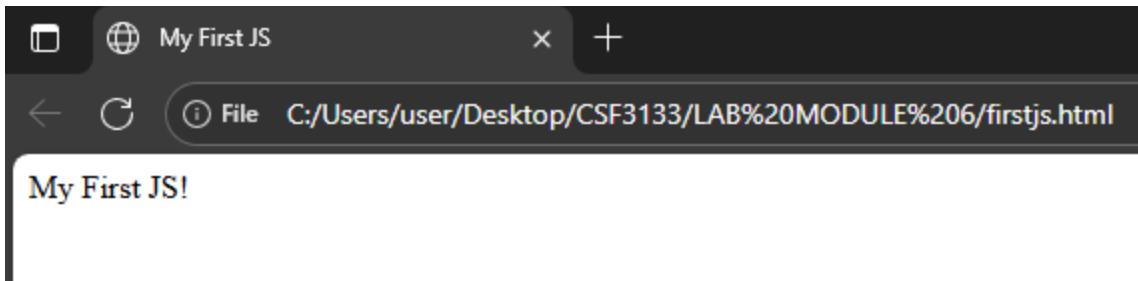
Group : K4

Programme : Bachelor of Computer Science (Software Engineering) with Honors

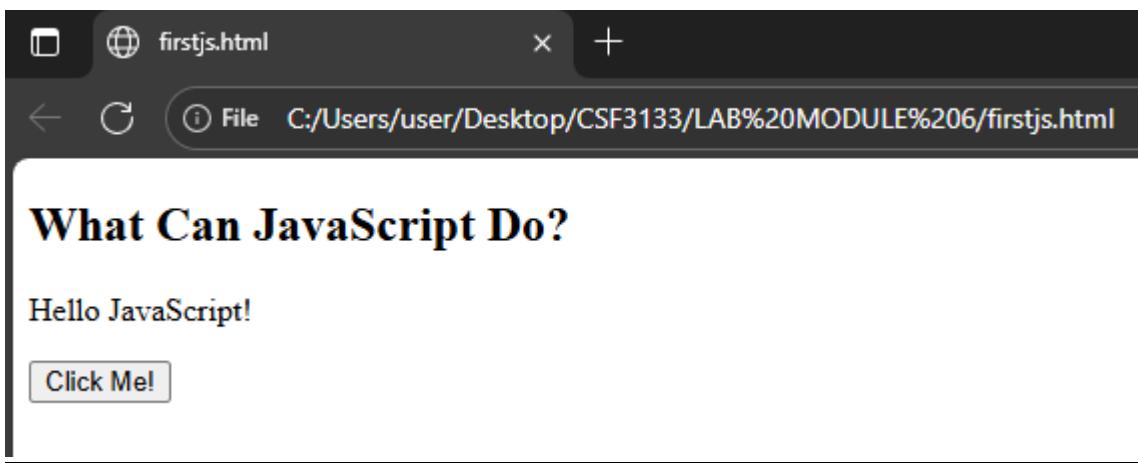
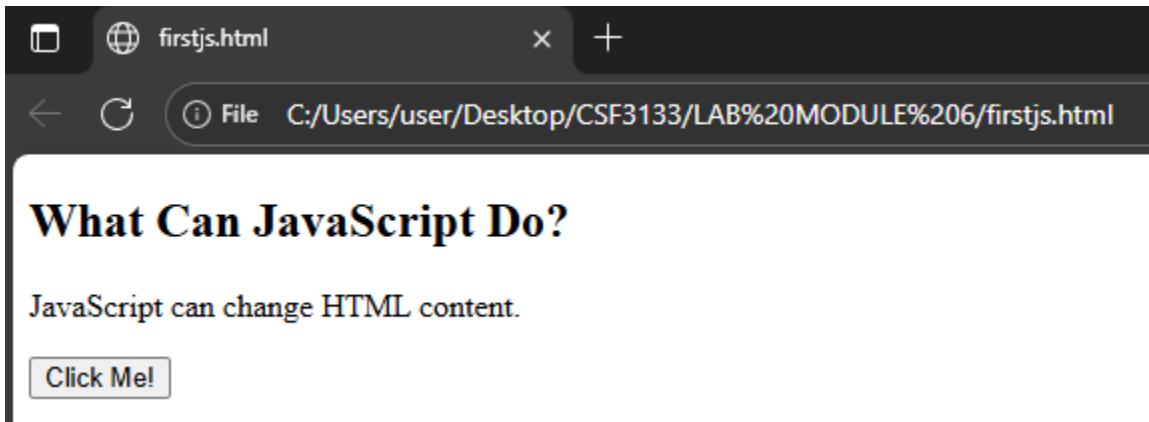
Lecturer's Name: Assoc. Prof. Ts. Dr. Wan Nural Jawahir

Lab Moderator's Name: Miss Wan Fatin Fatihah binti Yahya

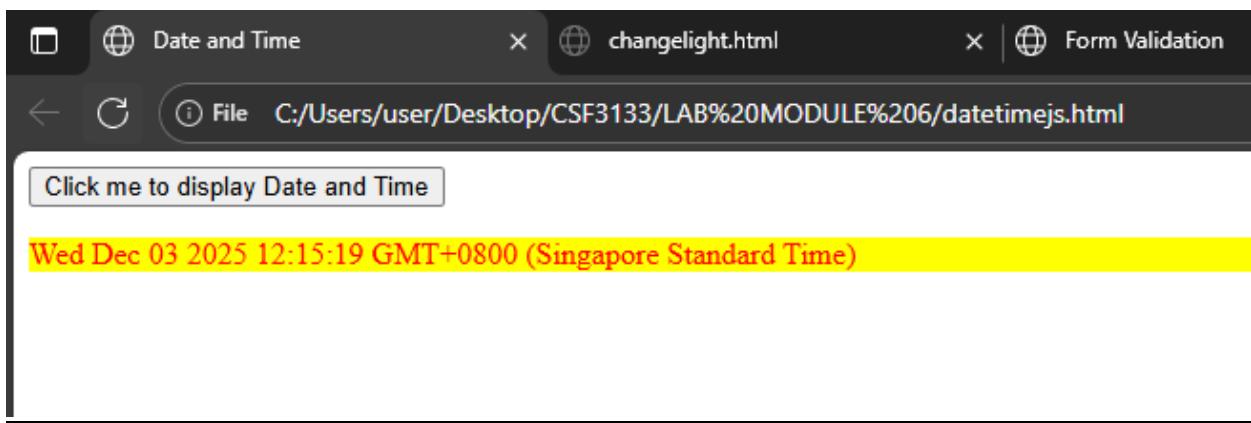
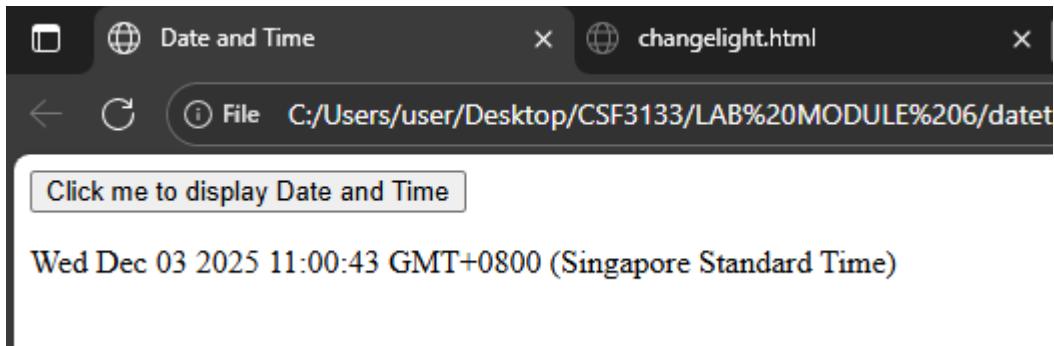
## 6.3 BASIC JAVASCRIPT



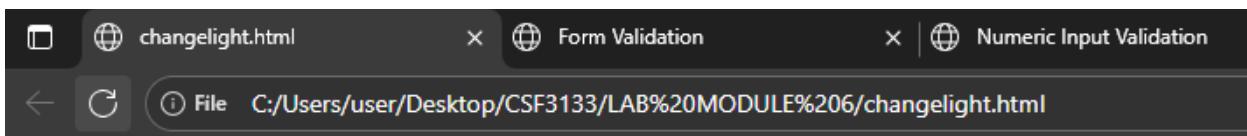
## 6.4 getElementById()



## **6.5 DATE AND TIME**



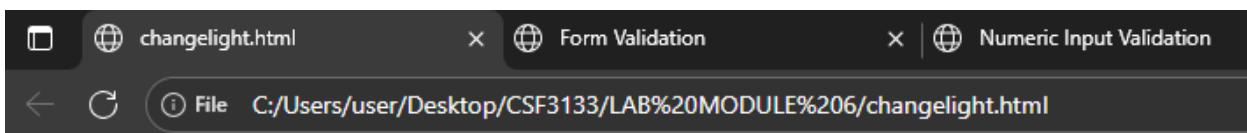
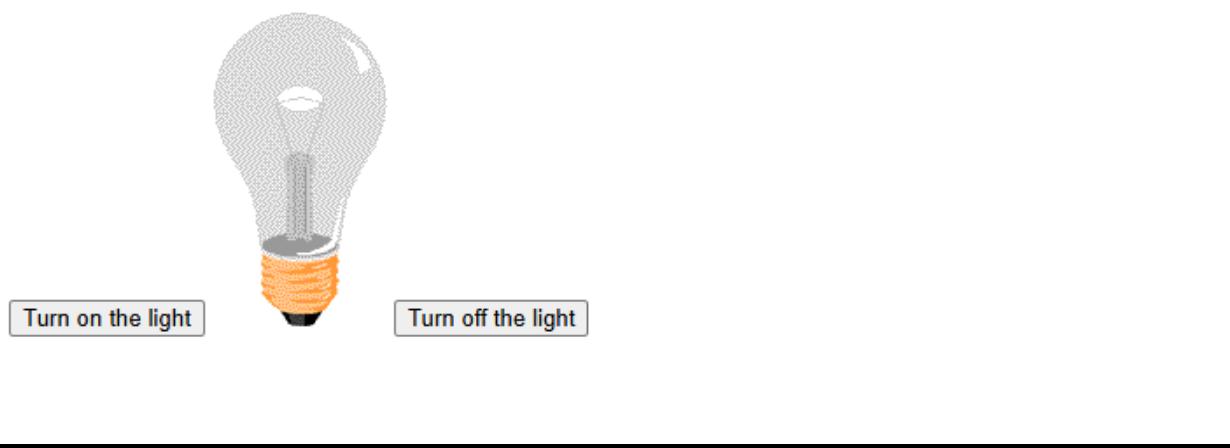
## **6.6 CHANGE HTML ATTRIBUTE VALUES**



### **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.



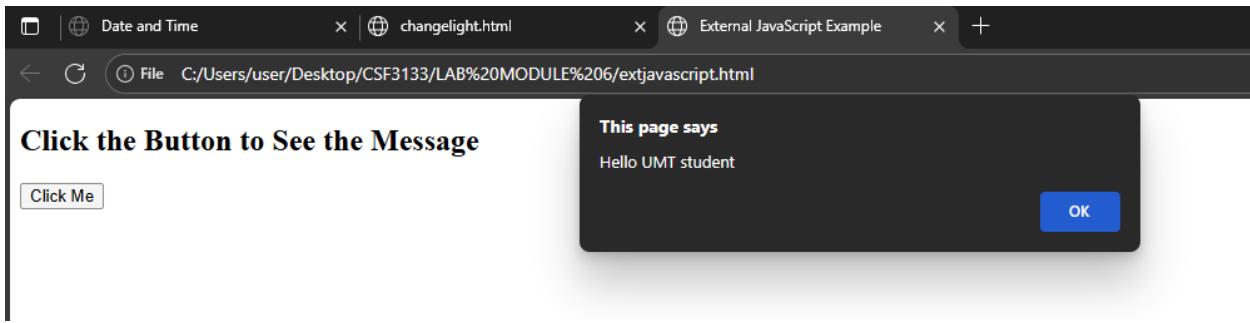
### **What Can JavaScript \index{JavaScript} Do?**

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

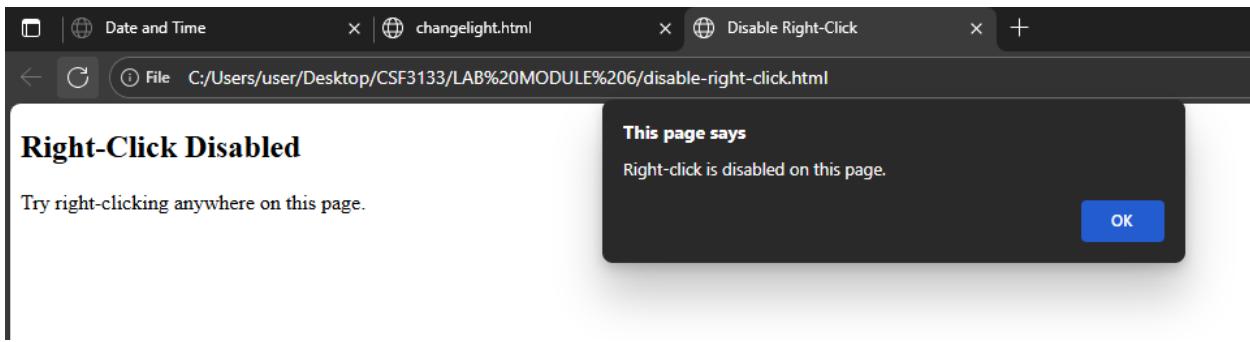
In this case, JavaScript \index{JavaScript} changes the value of the 'src' (source) attribute of an image.



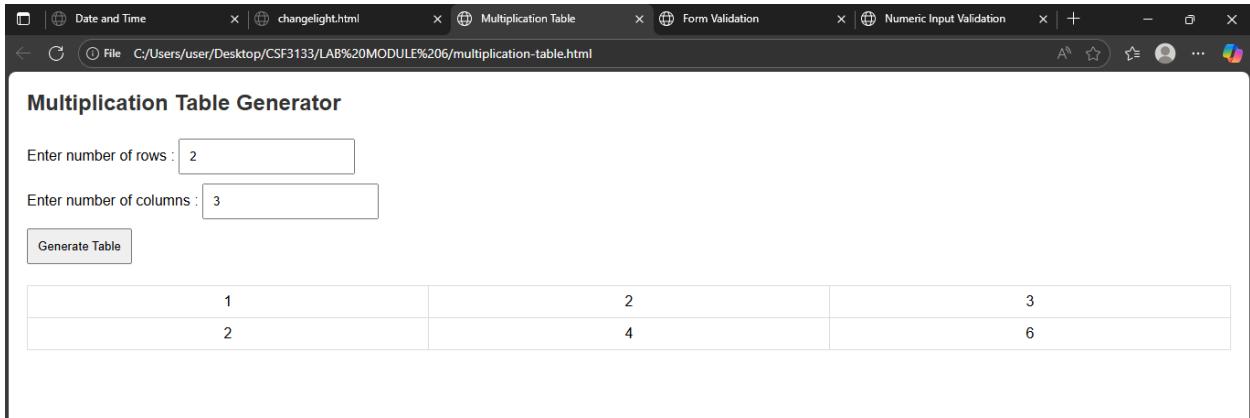
## **6.7 LINK TO FILE JAVASCRIPT (\*.js)**



## **6.8 WORKING WITH EVENTS**

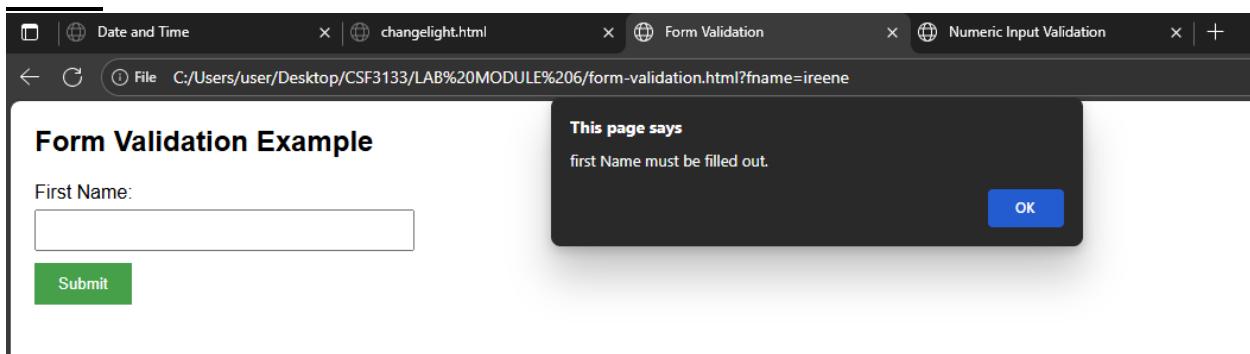


## **6.9 MULTIPLICATION TABLE**



## **6.10 CLIENT-SIDE VALIDATION**

### **6.10.1**



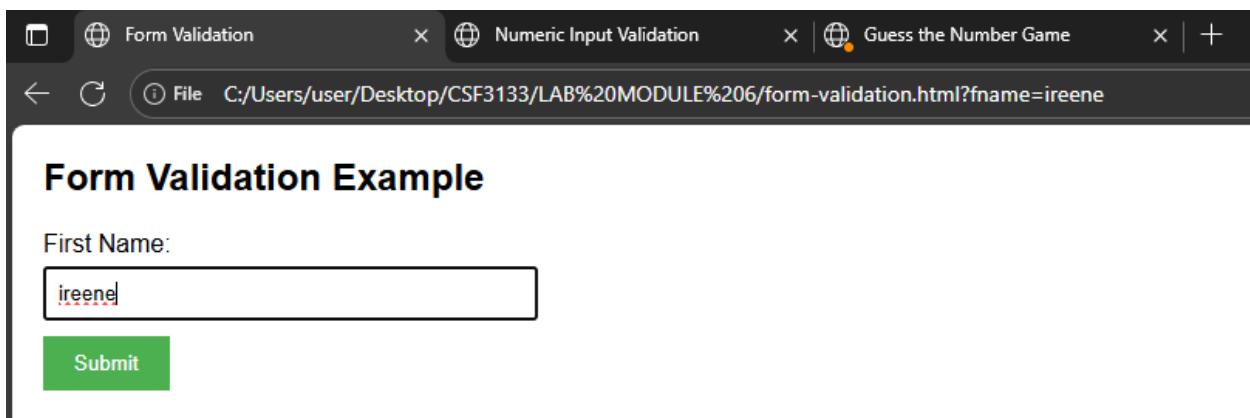
Form Validation Example

First Name:

Submit

This page says  
first Name must be filled out.

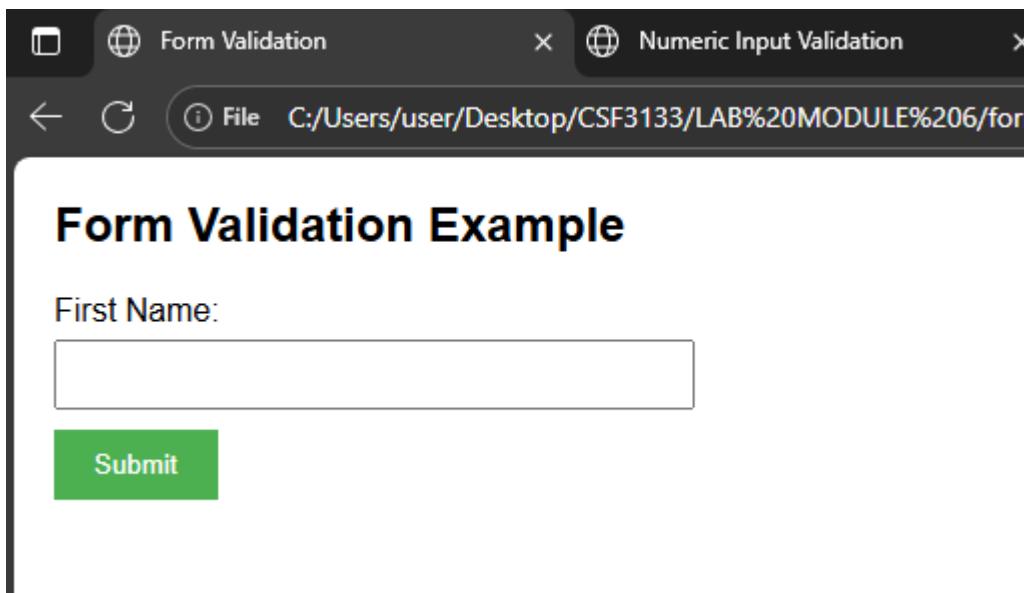
OK



Form Validation Example

First Name:

Submit



Form Validation Example

First Name:

Submit

## **6.10.2**

The image displays four consecutive screenshots of a web browser window titled "Numeric Input Validation Example". The browser tabs are "Date and Time", "changelight.html", "Form Validation", and "Numeric Input Validation". The address bar shows the file path "C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/numeric-validation.html?age=12".

**Screenshot 1:** The input field contains an empty string. A modal dialog box says "This page says Age field cannot be empty." with an "OK" button.

**Screenshot 2:** The input field contains the non-numeric string "hai". A modal dialog box says "This page says Please enter a valid numeric value." with an "OK" button.

**Screenshot 3:** The input field contains the invalid number "-1". A modal dialog box says "This page says Please enter a number between 1 and 120." with an "OK" button.

**Screenshot 4:** The input field contains the valid number "12". A modal dialog box says "This page says Form submitted successfully!" with an "OK" button.

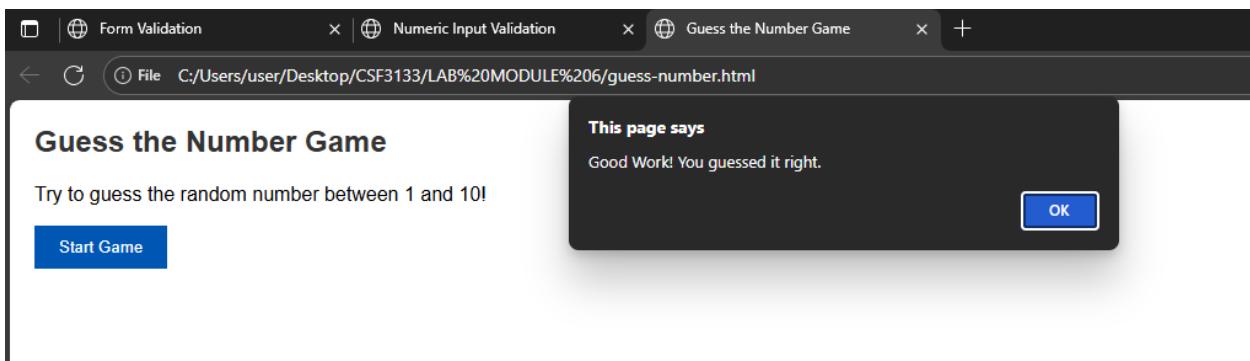
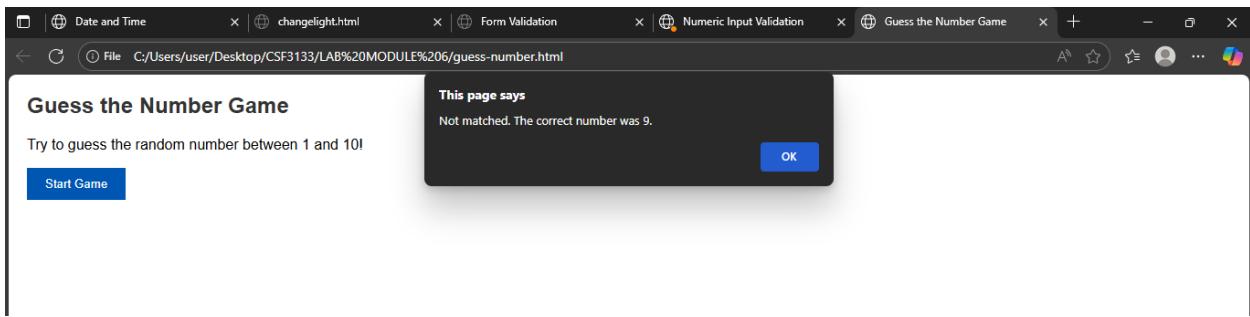
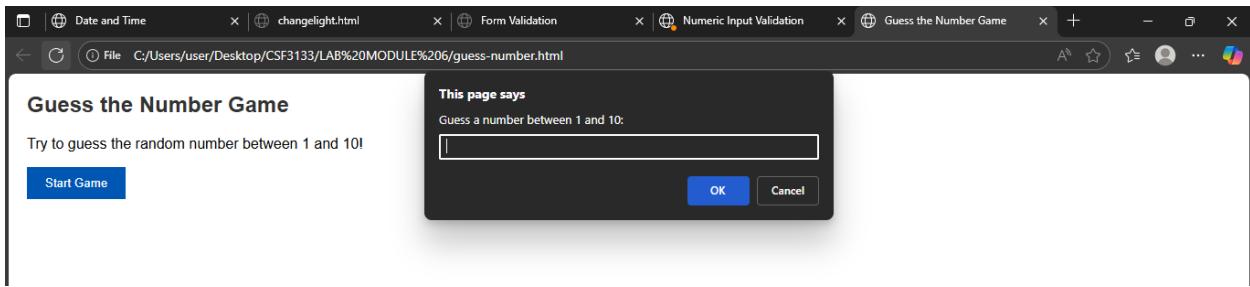
**Page Content:**

**Numeric Input Validation Example**

Enter Your Age:

**Submit**

## **6.11 MATH FUNCTION**



## **6.12 LAB EXERCISE 6**

```
index - 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>Quiz Application</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>

    <header>
        <h1>JavaScript Quiz</h1>
        <p>Test your knowledge and beat the timer!</p>
    </header>

    <section class="quiz-container">
        <div id="timer">Time Left: 10s</div>

        <div id="question"></div>
        <div id="options"></div>

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

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

    <footer>
        <p id="score"></p>
    </footer>

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

style - Notepad

File Edit Format View Help

```
body {  
    font-family: Arial, sans-serif;  
    background-color: #eef2f3;  
    text-align: center;  
    margin: 20px;  
}  
  
header h1 {  
    color: #222;  
}  
  
.quiz-container {  
    background: white;  
    padding: 20px;  
    width: 400px;  
    margin: auto;  
    border-radius: 10px;  
    box-shadow: 0 0 10px rgba(0,0,0,0.2);  
}  
  
#timer {  
    font-size: 18px;  
    margin-bottom: 15px;  
    font-weight: bold;  
}  
  
#options button {  
    display: block;  
    width: 100%;  
    margin: 8px 0;  
    padding: 10px;  
    border-radius: 6px;  
    cursor: pointer;  
    border: none;  
    background-color: #007BFF;  
    . . .
```

 style - Notepad

```
File Edit Format View Help
background-color: #007BFF;
color: white;
}

#options button:hover {
    background-color: #0056b3;
}

#feedback {
    margin: 10px 0;
    font-size: 16px;
    font-weight: bold;
}

#nextBtn {
    margin-top: 10px;
    padding: 10px;
    width: 100%;
    border: none;
    background-color: #28a745;
    color: white;
    cursor: pointer;
    border-radius: 6px;
}

#nextBtn:hover {
    background-color: #218838;
}

footer {
    margin-top: 20px;
    font-size: 18px;
    font-weight: bold;
}
```

```
script - Notepad
File Edit Format View Help
// Questions array
const questions = [
    {
        question: "What does HTML stand for?",
        options: ["Hyper Trainer Marking Language", "Hyper Text Markup Language", "Hyper Text Marketing Language", "Hypertensive Text Markup Language"],
        answer: 1
    },
    {
        question: "Which language is used for styling web pages?",
        options: ["HTML", "CSS", "Python", "C++"],
        answer: 1
    },
    {
        question: "What does JS stand for?",
        options: ["JavaSuper", "JustScript", "JavaScript", "JumboScript"],
        answer: 2
    }
];

let currentIndex = 0;
let score = 0;
let timeLeft = 10;
let timer;

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

script - Notepad
File Edit Format View Help
// Start timer
function startTimer() {
    timeLeft = 10;
    document.getElementById("timer").innerText = `Time Left: ${timeLeft}s`;

    timer = setInterval(() => {
        timeLeft--;
        document.getElementById("timer").innerText = `Time Left: ${timeLeft}s`;

        if (timeLeft <= 0) {
            clearInterval(timer);
            nextQuestion();
        }
    }, 1000);
}

// Display question & options
function displayQuestion() {
    document.getElementById("question").innerText = questions[currentIndex].question;

    let optionsHTML = "";
    questions[currentIndex].options.forEach((option, i) => {
        optionsHTML += `<button onclick="checkAnswer(${i})">${option}</button>`;
    });

    document.getElementById("options").innerHTML = optionsHTML;
}
```

script - Notepad

File Edit Format View Help

```
// Check answer
function checkAnswer(selected) {
    clearInterval(timer);

    if (selected === questions[currentIndex].answer) {
        score++;
        document.getElementById("feedback").innerHTML = "✓ Correct!";
        document.getElementById("feedback").style.color = "green";
    } else {
        document.getElementById("feedback").innerHTML = "✗ Wrong!";
        document.getElementById("feedback").style.color = "red";
    }
}

// Move to next question
function nextQuestion() {
    currentIndex++;

    if (currentIndex < questions.length) {
        document.getElementById("feedback").innerText = "";
        displayQuestion();
        startTimer();
    } else {
        endQuiz();
    }
}

// Start quiz
function startQuiz() {
    shuffleQuestions();
    displayQuestion();
    startTimer();
}

// Finish quiz & show score
function endQuiz() {
    document.getElementById("question").innerText = "Quiz Finished!";
    document.getElementById("options").innerHTML = "";
    document.getElementById("feedback").innerHTML = "";
    document.getElementById("timer").innerHTML = "";

    document.getElementById("score").innerText = `Your Score: ${score} / ${questions.length}`;
}

// Start quiz automatically when page loads
startQuiz();
```

# JavaScript Quiz

Test your knowledge and beat the timer!

**Time Left: 3s**

Which language is used for styling web pages?

HTML

CSS

Python

C++

✓ Correct!

Next Question

# JavaScript Quiz

Test your knowledge and beat the timer!

**Time Left: 8s**

What does HTML stand for?

Hyper Trainer Marking Language

Hyper Text Markup Language

Hyper Text Marketing Language

Hypertensive Text Markup Language

**X Wrong!**

[Next Question](#)

# JavaScript Quiz

Test your knowledge and beat the timer!

**Time Left: 9s**

What does JS stand for?

JavaSuper

JustScript

JavaScript

JumboScript

✓ Correct!

Next Question

# JavaScript Quiz

Test your knowledge and beat the timer!

Quiz Finished!

Next Question

**Your Score: 2 / 3**