



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

**LAB REPORT 6**

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Matric : S75702

Date : 3 December 2025

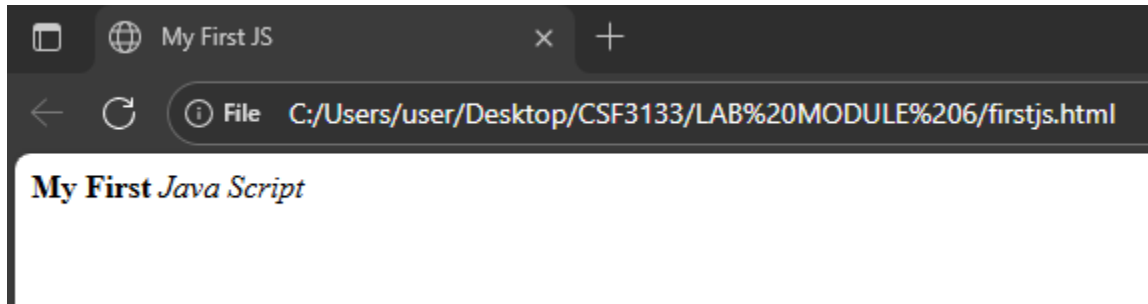
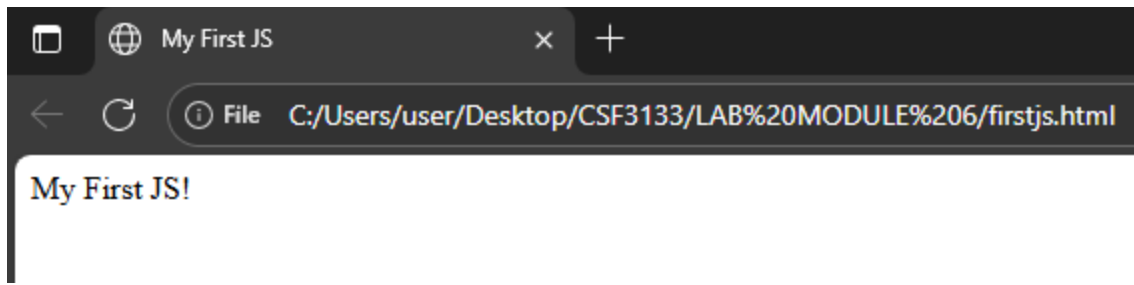
Group : K4

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

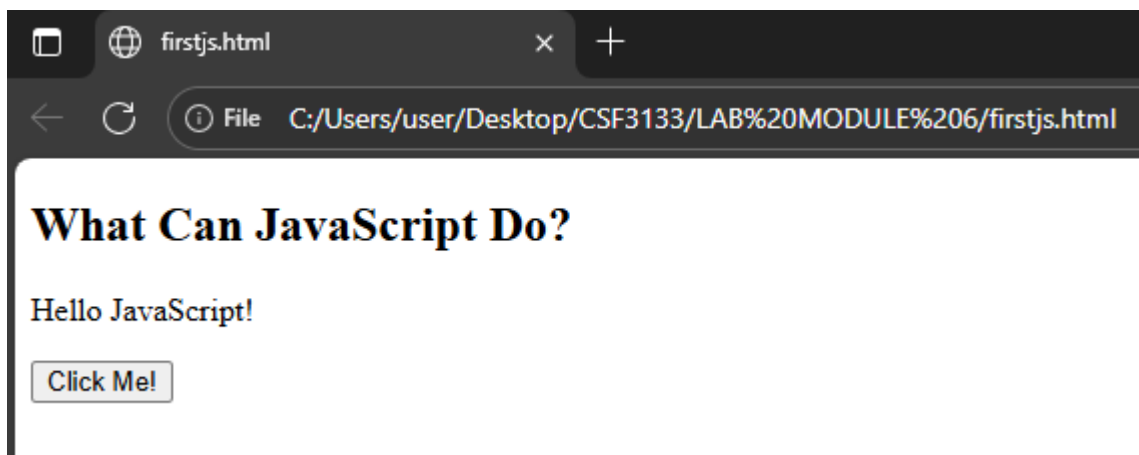
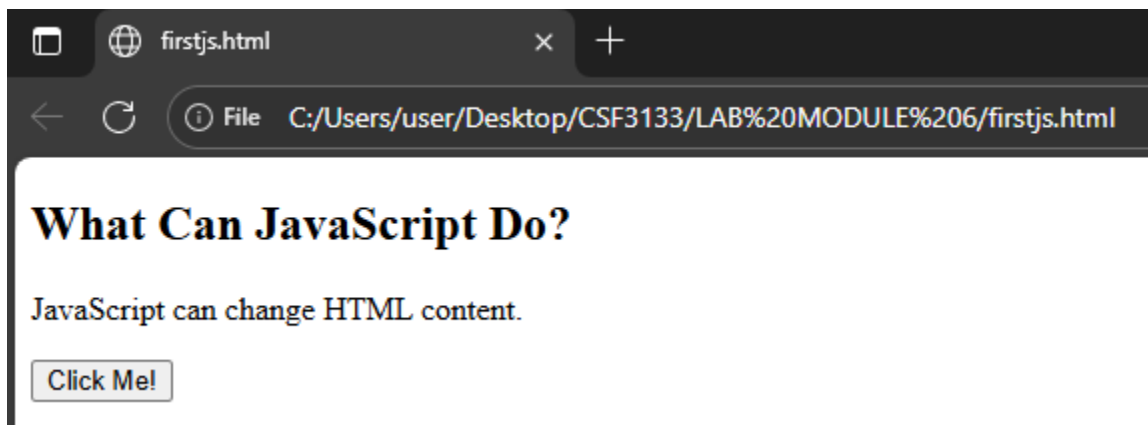
Lecturer's Name: Assoc. Prof. Ts. Dr. Wan Nural Jawahir

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

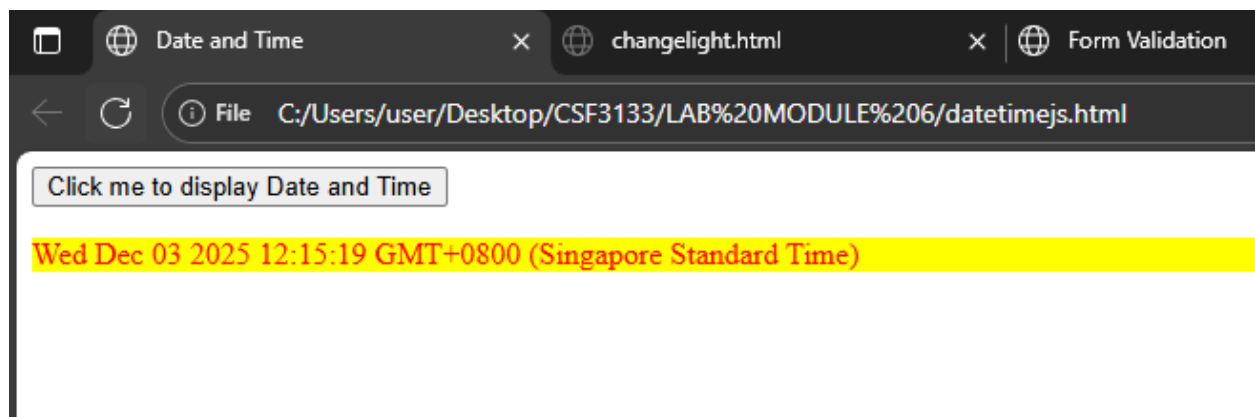
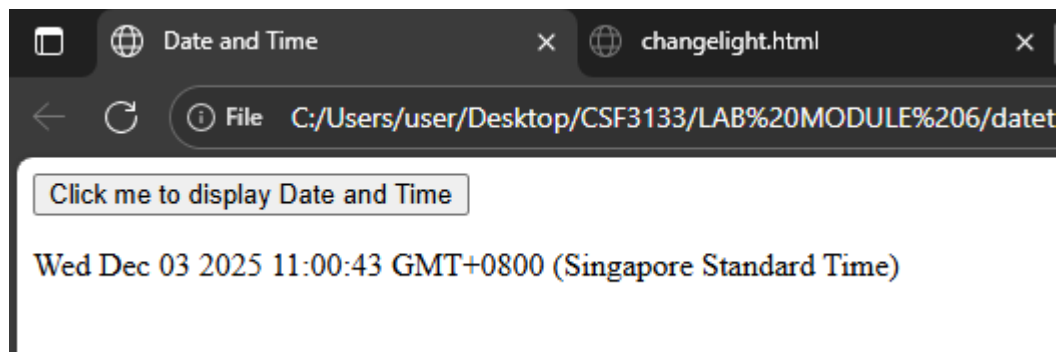
## 6.3 BASIC JAVASCRIPT



## 6.4 getElementById()



## 6.5 DATE AND TIME



## 6.6 CHANGE HTML ATTRIBUTE VALUES

changelight.html

Form Validation

Numeric Input Validation

File C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/changelight.html

### 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 on the light



Turn off the light

changelight.html

Form Validation

Numeric Input Validation


File C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/changelight.html

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

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

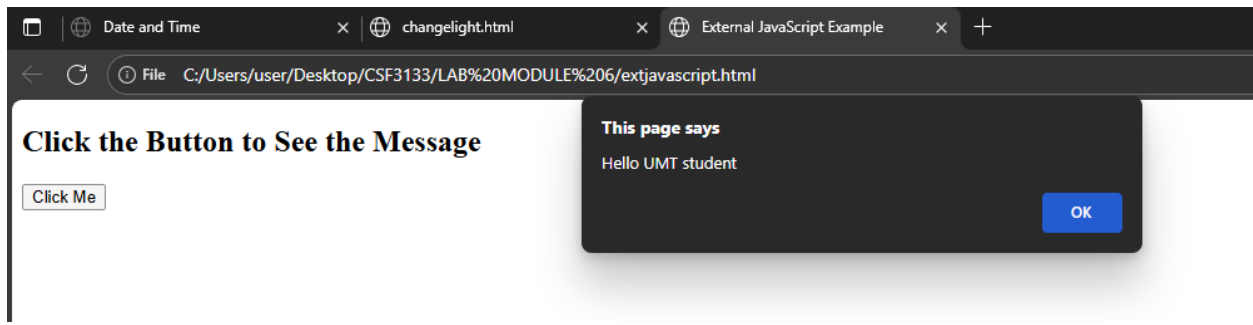
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Turn on the light

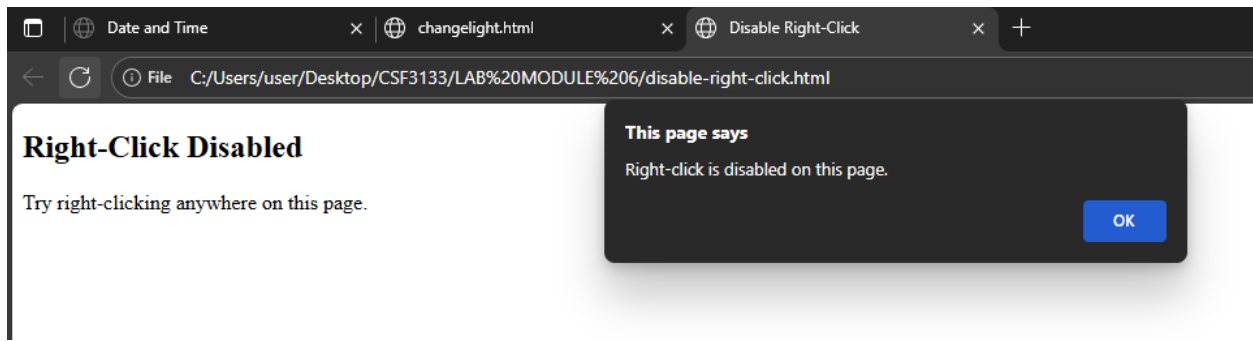


Turn off the light

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



## 6.8 WORKING WITH EVENTS



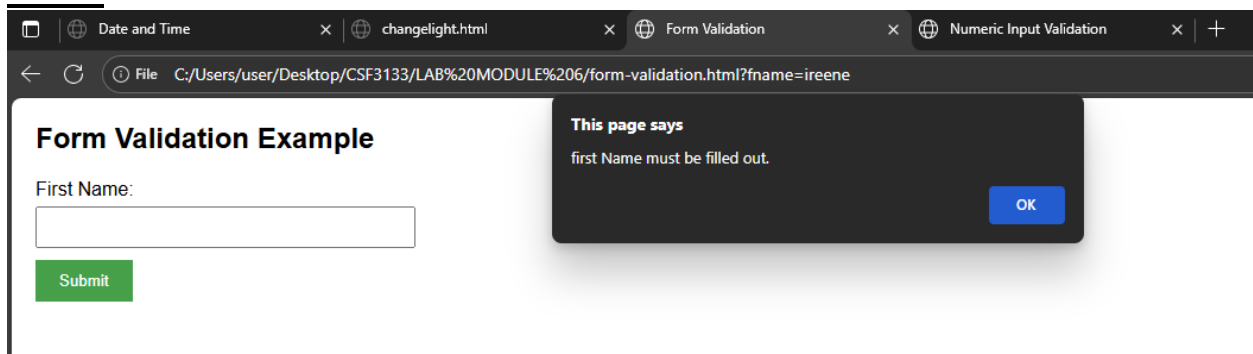
## 6.9 MULTIPLICATION TABLE

A screenshot of a web browser window with five tabs: "Date and Time", "changelight.html", "Multiplication Table", "Form Validation", and "Numeric Input Validation". The address bar shows the file path: "C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/multiplication-table.html". The main content area displays a form titled "Multiplication Table Generator". The form has two input fields: "Enter number of rows :" with the value "2" and "Enter number of columns :" with the value "3". Below the input fields is a button labeled "Generate Table". Below the button is a table with 2 rows and 3 columns.

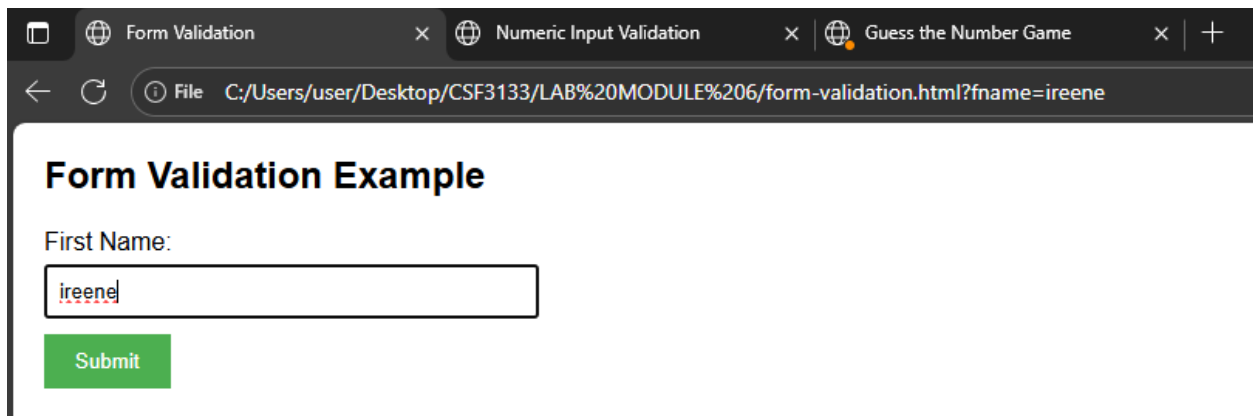
|   |   |   |
|---|---|---|
| 1 | 2 | 3 |
| 2 | 4 | 6 |

## 6.10 CLIENT-SIDE VALIDATION

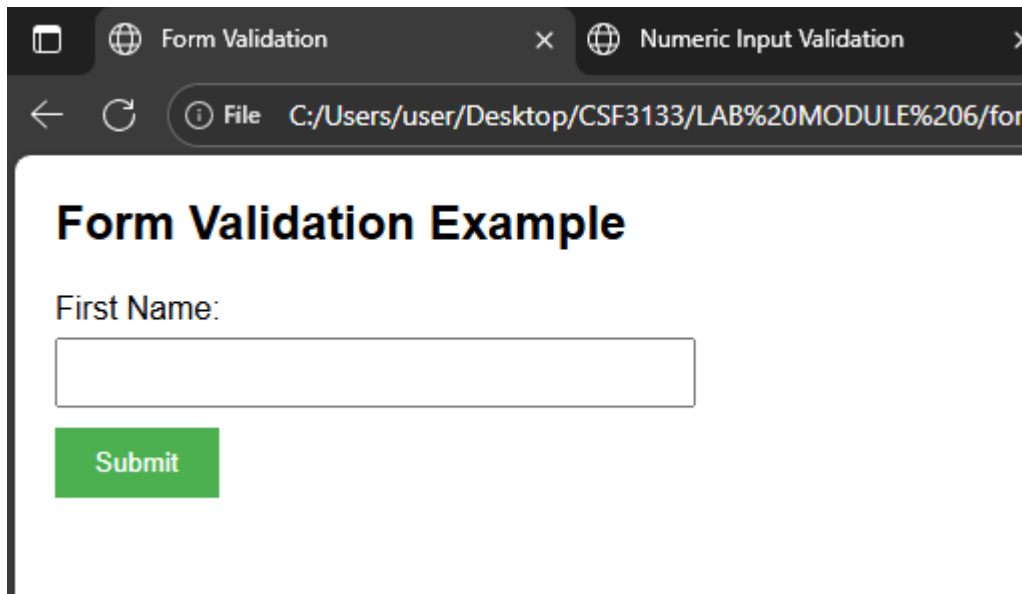
### 6.10.1



A screenshot of a web browser with multiple tabs. The active tab is titled "Form Validation". The address bar shows the file path: `C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/form-validation.html?fname=ireene`. The page content includes a heading "Form Validation Example", a label "First Name:", an empty text input field, and a green "Submit" button. A dark grey toast notification is displayed on the right side of the page, containing the text "This page says" and "first Name must be filled out.", with a blue "OK" button.



A screenshot of a web browser with three tabs: "Form Validation", "Numeric Input Validation", and "Guess the Number Game". The active tab is "Form Validation". The address bar shows the same file path as the previous screenshot. The page content is identical, but the text input field now contains the name "ireene". The green "Submit" button remains visible.



A screenshot of a web browser with two tabs: "Form Validation" and "Numeric Input Validation". The active tab is "Form Validation". The address bar shows the file path: `C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/form-validation.html?fname=ireene`. The page content includes the heading "Form Validation Example", the label "First Name:", an empty text input field, and a green "Submit" button.

## 6.10.2

Browser tabs: Date and Time, changelight.html, Form Validation, Numeric Input Validation

File: C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/numeric-validation.html?age=12

### Numeric Input Validation Example

Enter Your Age:

**This page says**

Age field cannot be empty.

Browser tabs: Date and Time, changelight.html, Form Validation, Numeric Input Validation

File: C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/numeric-validation.html?age=hai

### Numeric Input Validation Example

Enter Your Age:

**This page says**

Please enter a valid numeric value.

Browser tabs: Date and Time, changelight.html, Form Validation, Numeric Input Validation

File: C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/numeric-validation.html?age=12

### Numeric Input Validation Example

Enter Your Age:

**This page says**

Please enter a number between 1 and 120.

Browser tabs: Date and Time, changelight.html, Form Validation, Numeric Input Validation

File: C:/Users/user/Desktop/CSF3133/LAB%20MODULE%206/numeric-validation.html?age=hai

### Numeric Input Validation Example

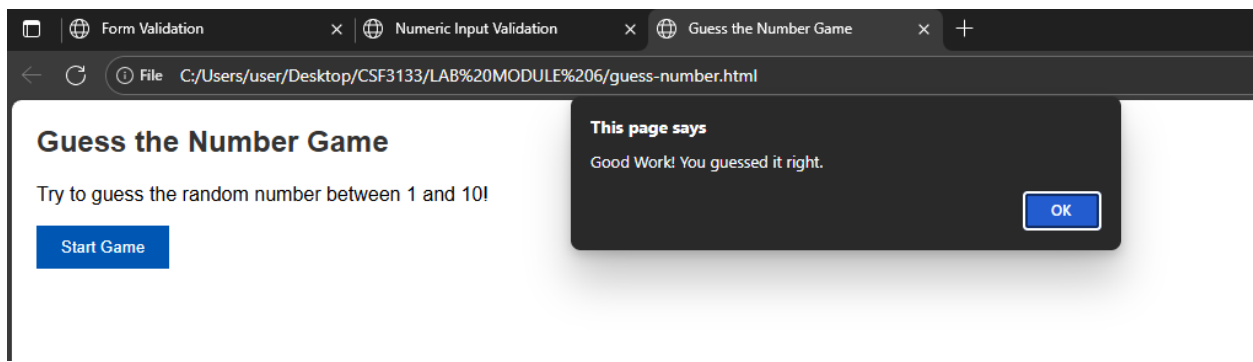
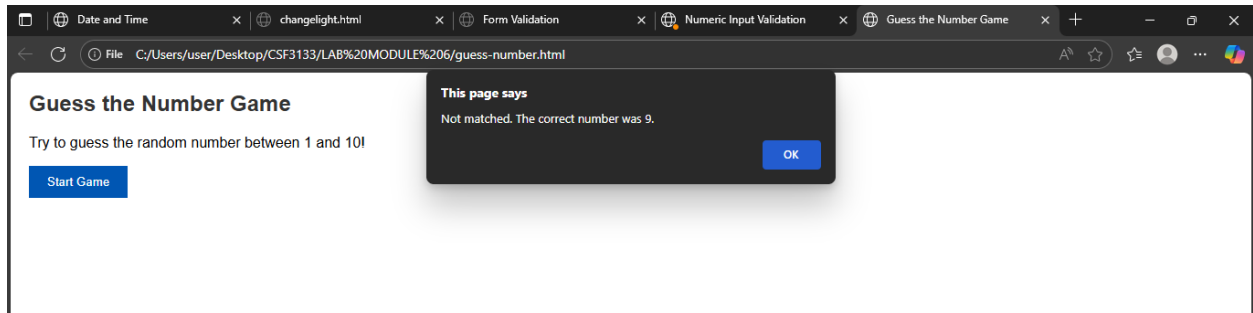
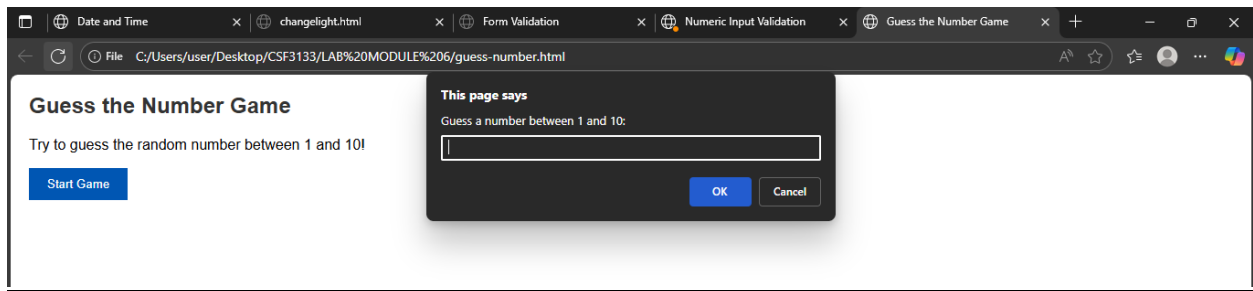
Enter Your Age:

**This page says**


Form submitted successfully!

## 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

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```
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

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```
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 = "X 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**