



K4 CSF3123 WEB-BASED INTERFACE DESIGN

SEM 3

LAB REPORT 6

PREPARED FOR:

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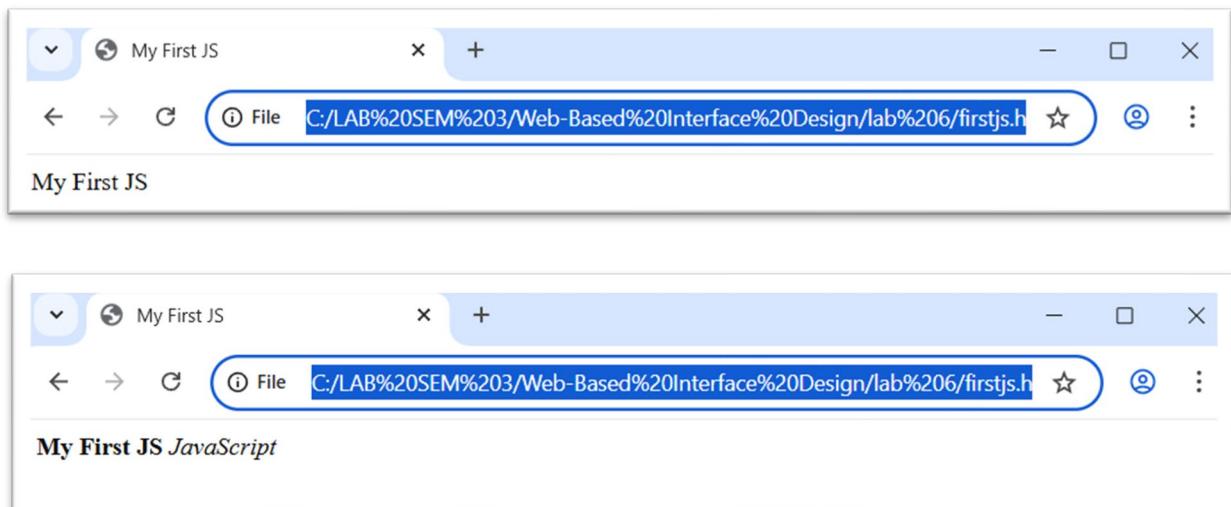
PREPARED BY:

**WAN NUR SYAFIQAH IZANI BINTI WAN HIZHAN**

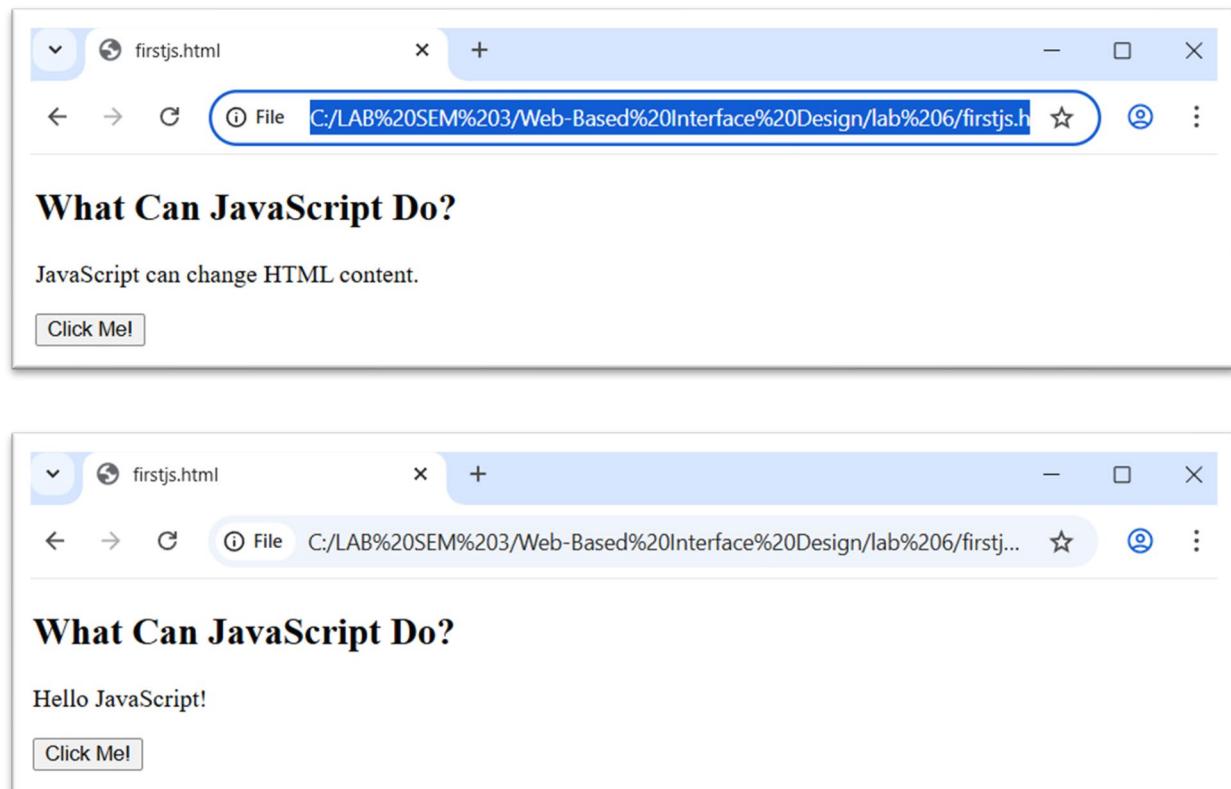
NO. MATRIC: **S75776**

SUBMIT BY: **4/12/2025**

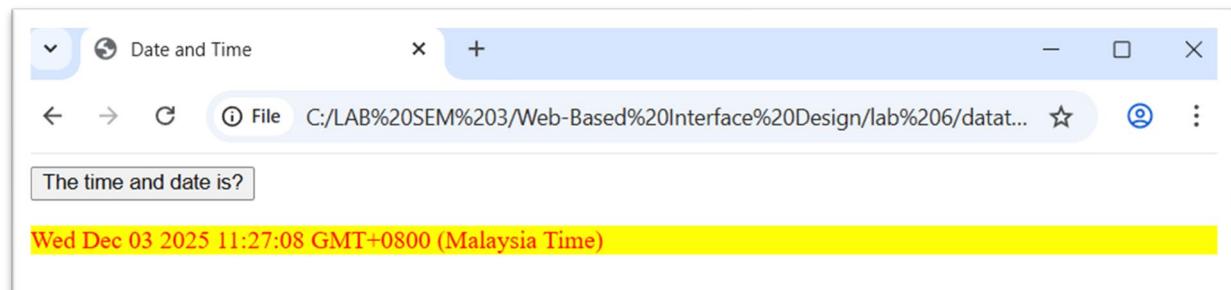
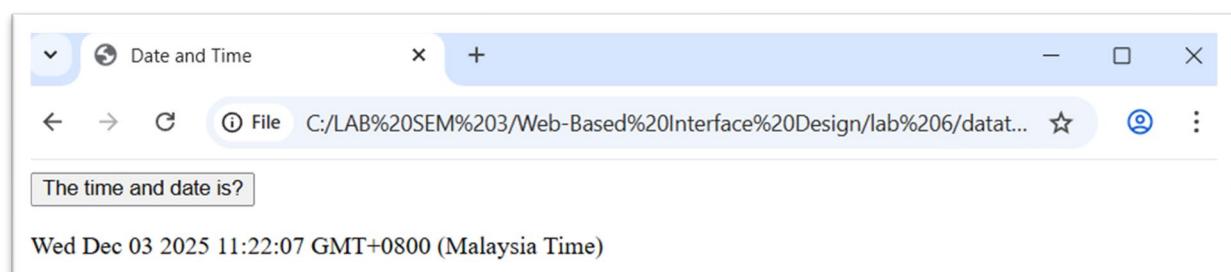
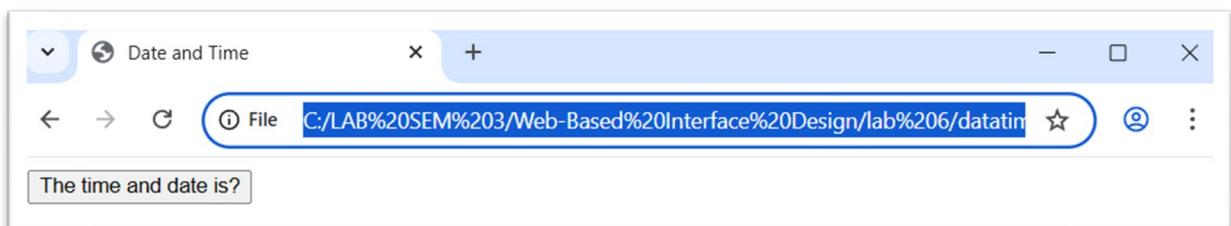
## 6.3 Basic JavaScript



## 6.4 getElementById()



## 6.5 Date and Time



## 6.6 Change HTML Attribute Values



changelight.html

File C:/LAB%20SEM%203/Web-Based%20Interface%20Design/lab%206/chang...

## 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

### 6.7 Link to file JavaScript

External JavaScript Example

File C:/LAB%20SEM%203/Web-Based%20Interface%20Design/lab%206/extja...

### Click the Button to See the Message

Click me

External JavaScript Example

File C:/LAB%20SEM%203/Web-Based%20Interface%20Design/lab%206/extja...

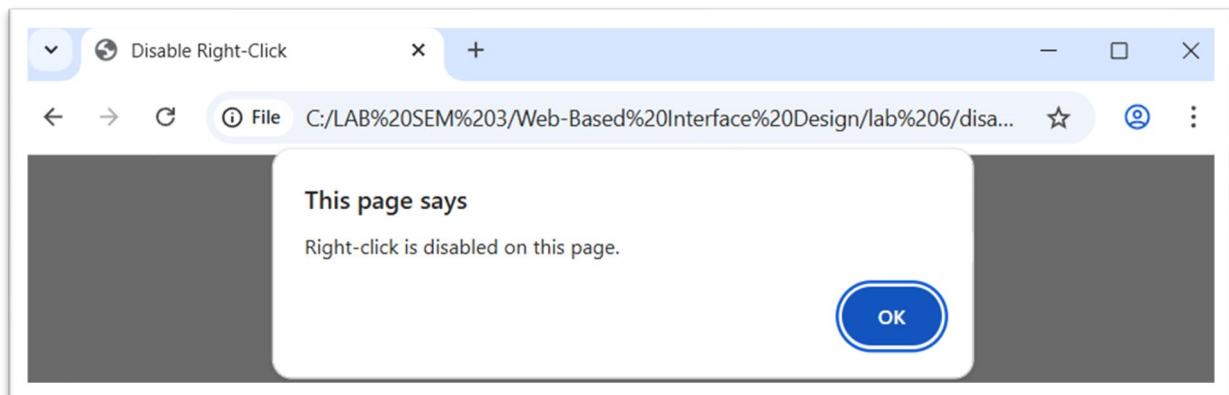
Click the Button

This page says  
Hello UMT student

Click me

OK

## 6.8 Working with events



## 6.9 Multiplication Table

A screenshot of a web browser window titled "Multiplication Table". The address bar shows the URL: C:/LAB%20SEM%203/Web-Based%20Interface%20Design/lab%206/multi... . The main content area features the heading "Multiplication Table Generator". Below it are two input fields: "Enter number of rows:" containing "6" and "Enter number of columns:" containing "5". A "Generate Table" button is positioned below these fields. To the right, a 6x5 grid table is displayed:

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15
4	8	12	16	20
5	10	15	20	25
6	12	18	24	30

### 6.10.1 Form Validation

Case 1

The screenshot shows a web browser window titled "Form Validation". The address bar indicates the file path: C:/LAB%20SEM%203/Web-Based%20Interface%20Design/lab%206.html. The main content area displays a "Form Validation" page. On the left, there is a form with a label "First Name:" and a text input field. Below the input field is a green "Submit" button. A white tooltip-like message box appears over the form, containing the text "This page says" at the top and "First name must be filled out" below it. In the bottom right corner of the message box is a blue "OK" button.

Case 2

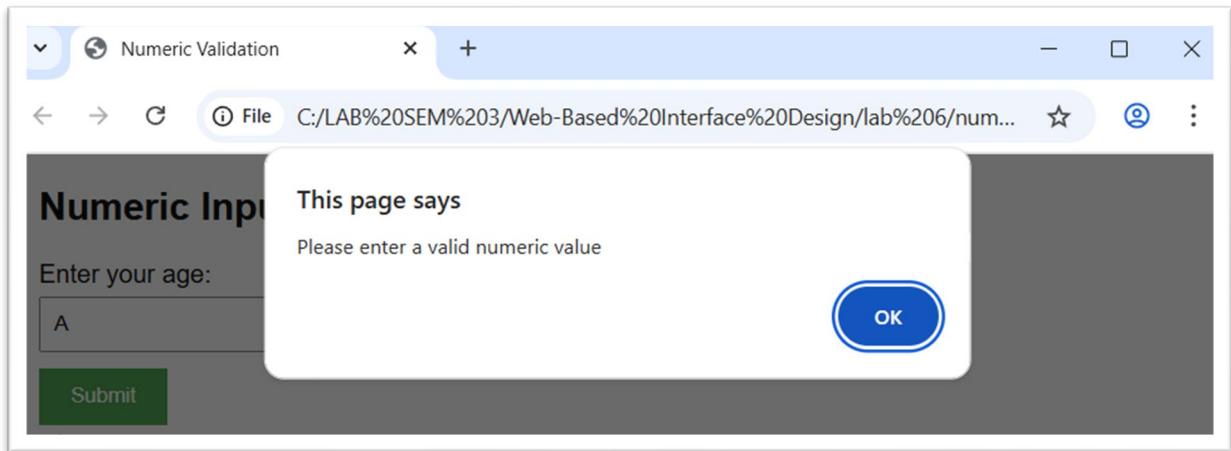
The screenshot shows a web browser window titled "Form Validation". The address bar indicates the file path: C:/LAB%20SEM%203/Web-Based%20Interface%20Design/lab%206.html. The main content area displays a "Form Validation" page. On the left, there is a form with a label "First Name:" and a text input field containing the text "Alias". Below the input field is a green "Submit" button.

### 6.10.2 Numeric Input Validation

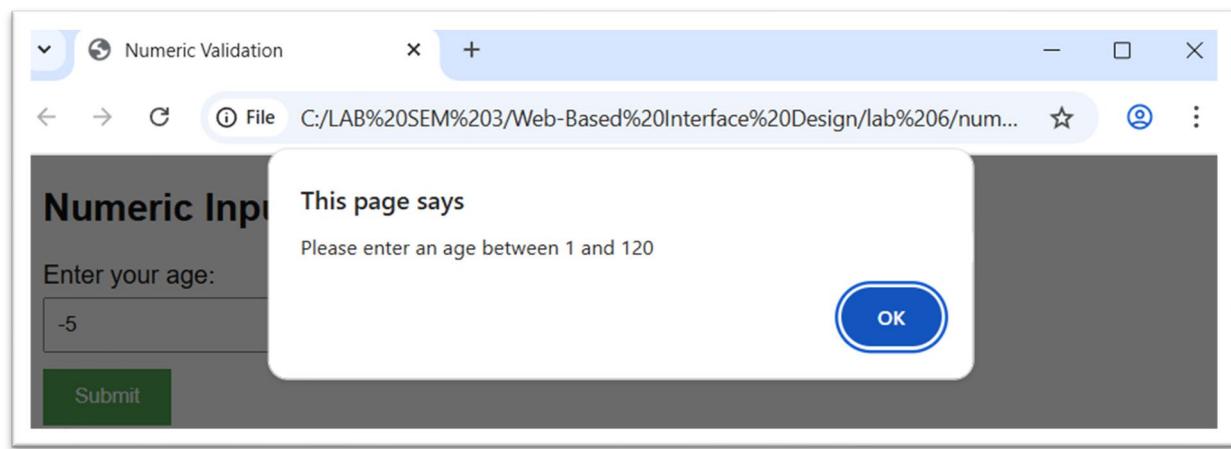
Case 1:

The screenshot shows a web browser window titled "Numeric Validation". The address bar indicates the file path: C:/LAB%20SEM%203/Web-Based%20Interface%20Design/lab%206/num.html. The main content area displays a "Numeric Input" page. On the left, there is a form with a label "Enter your age:" and a text input field. Below the input field is a green "Submit" button. A white tooltip-like message box appears over the form, containing the text "This page says" at the top and "Age field cannot be empty" below it. In the bottom right corner of the message box is a blue "OK" button.

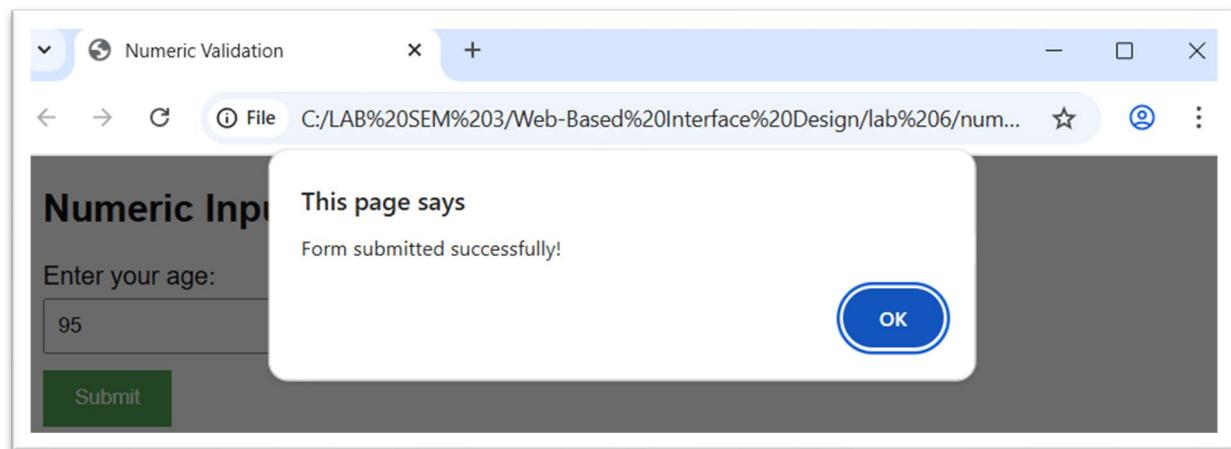
Case 2:



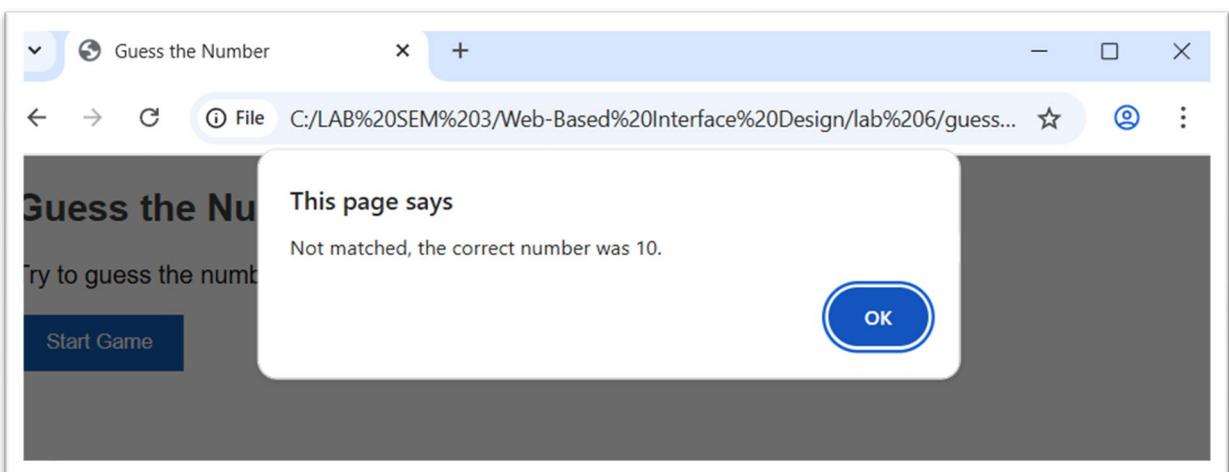
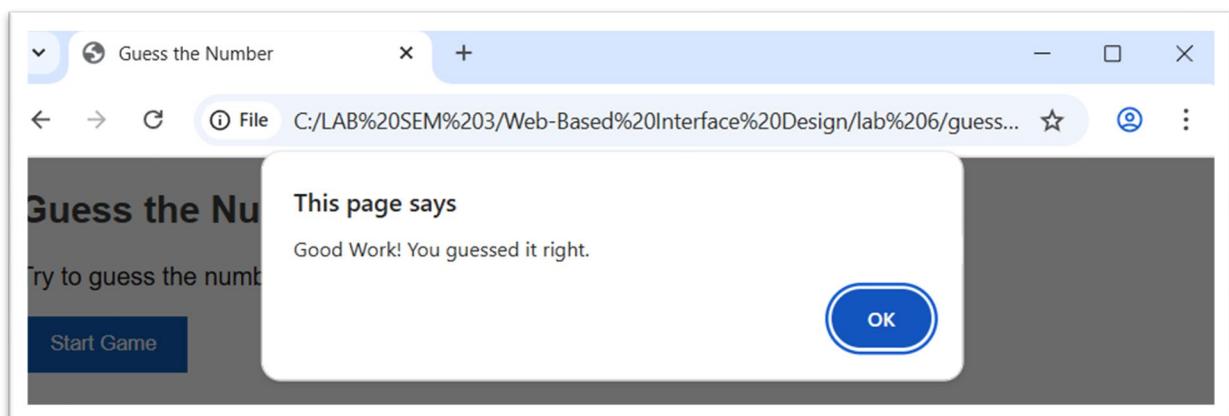
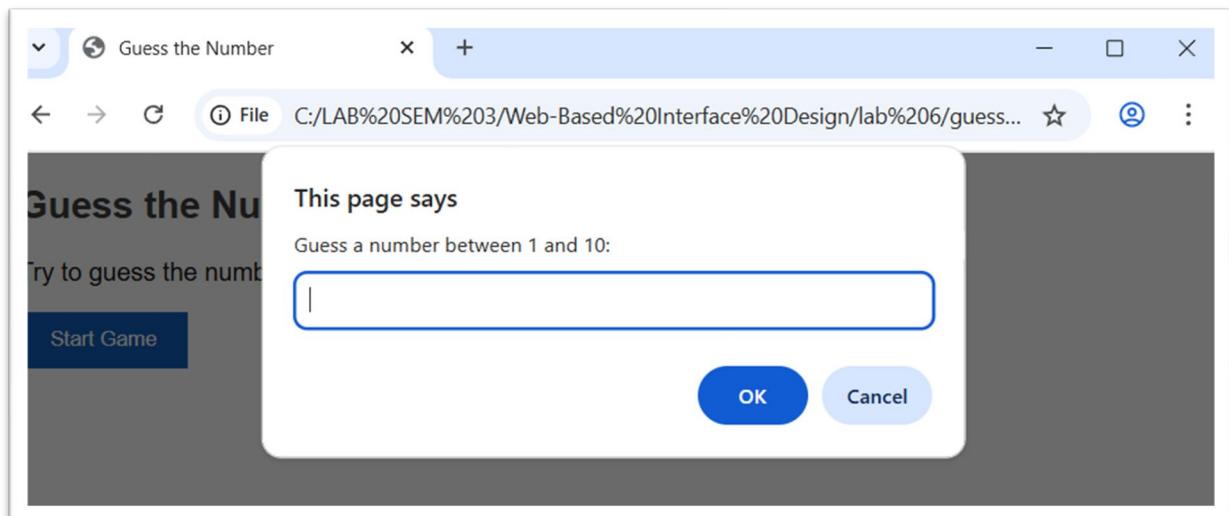
Case 3:



Case 4:



### 6.11.1 Guess a Number



## Lab Exercise

index.html

```
C: > LAB SEM 3 > Web-Based Interface Design > lab 6 > index.html > ...
1  <!DOCTYPE html>
2  <html lang="en">
3
4  <head>
5      <meta charset="UTF-8">
6      <title>Quiz Application</title>
7      <link rel="stylesheet" href="style.css">
8  </head>
9
10 <body>
11
12     <header>
13         <h1>
14             |   Welcome to the Quiz Application
15         </h1>
16     </header>
17
```

```
18     <main>
19         <div id="quiz-box">
20             <div id="timer">Time left <span id="time">10</span></div>
21
22             <div id="question-container">
23                 <h2 id="question-text"></h2>
24                 <div id="options"></div>
25             </div>
26
27             <div id="feedback"></div>
28
29             <button id="next-btn">Next Question</button>
30         </div>
31
32         <div id="result-box" class="hidden">
33             <h2>Your Final Score:</h2>
34             <p id="score"></p>
35             <button onclick="startQuiz()">Restart Quiz</button>
36         </div>
37     </main>
38
39     <script src="script.js"></script>
40 </body>
41
42 </html>
```

## style.css

```
1  h1{  
2      color: #0f0b0e;  
3      background-color: #dc0872;  
4  
5  }  
6  body {  
7      font-family: Arial, sans-serif;  
8      text-align: center;  
9      background: #f4f4f4;  
10     padding: 20px;  
11  }  
12  
13  
14 #quiz-box, #result-box {  
15     background: #rgb(118, 47, 107);  
16     padding: 20px;  
17     width: 50%;  
18     margin: auto;  
19     border-radius: 10px;  
20     box-shadow: 0 0 10px gray;  
21  }
```

```
23 button {  
24     margin-top: 15px;  
25     padding: 10px 20px;  
26     background: #c30f87;  
27     color: white;  
28     border: none;  
29     border-radius: 5px;  
30  }  
31  
32 .option-btn {  
33     display: block;  
34     width: 100%;  
35     margin: 10px 0;  
36     padding: 10px;  
37     background: #978194;  
38     border-radius: 5px;  
39     cursor: pointer;  
40  }  
41  
42 .correct {  
43     background: #3eaf5c !important;  
44     color: white;  
45  }  
46  
47 .incorrect {  
48     background: #e63946 !important;  
49     color: white;  
50  }  
51  
52 .hidden {  
53     display: none;  
54  }
```

## script.js

```
C: > LAB SEM 3 > Web-Based Interface Design > lab 6 > JS script.js > ...
1 // 1. Questions Array
2 let questions = [
3   {
4     question: "What does HTML stand for?",
5     options: ["Hyper Text Markup Language", "Home Tool Markup Language", "High Tech Modern Language"],
6     answer: 0
7   },
8   {
9     question: "Which language runs in a web browser?",
10    options: ["Python", "C++", "JavaScript"],
11    answer: 2
12  },
13  {
14    question: "What does CSS control?",
15    options: ["Structure", "Styling", "Database"],
16    answer: 1
17  }
18];
19
20 let currentIndex = 0;
21 let score = 0;
22 let timer;
23 let timeLeft = 10;
```

```
25 // 2. Shuffle Questions
26 function shuffleQuestions() {
27   questions.sort(() => Math.random() - 0.5);
28 }
29
30 // 3. Display Question
31 function displayQuestion() {
32   const q = questions[currentIndex];
33   document.getElementById("question-text").textContent = q.question;
34
35   const optionBox = document.getElementById("options");
36   optionBox.innerHTML = "";
37
38   q.options.forEach((opt, index) => {
39     const btn = document.createElement("button");
40     btn.textContent = opt;
41     btn.classList.add("option-btn");
42     btn.onclick = () => checkAnswer(index);
43     optionBox.appendChild(btn);
44   });
45
46   document.getElementById("feedback").textContent = "";
47 }
```

```
49 // 4. Check Answer
50 function checkAnswer(selected) {
51   const correct = questions[currentIndex].answer;
52   const optionButtons = document.querySelectorAll(".option-btn");
53
54   if (selected === correct) {
55     optionButtons[selected].classList.add("correct");
56     document.getElementById("feedback").textContent = "Correct!";
57     score++;
58   } else {
59     optionButtons[selected].classList.add("incorrect");
60     optionButtons[correct].classList.add("correct");
61     document.getElementById("feedback").textContent = "Incorrect!";
62   }
63
64 clearInterval(timer);
65 }
66
67 // 5. Move to Next Question
68 function nextQuestion() {
69   currentIndex++;
70
71   if (currentIndex >= questions.length) {
72     showScore();
73   } else {
74     startTimer();
75     displayQuestion();
76   }
77 }
```

```
79 // 6. Timer
80 function startTimer() {
81   timeLeft = 10;
82   document.getElementById("time").textContent = timeLeft;
83
84   timer = setInterval(() => {
85     timeLeft--;
86     document.getElementById("time").textContent = timeLeft;
87
88     if (timeLeft <= 0) {
89       clearInterval(timer);
90       nextQuestion();
91     }
92   }, 1000);
93 }
94
95 // 7. Start Quiz
96 function startQuiz() {
97   shuffleQuestions();
98   currentIndex = 0;
99   score = 0;
100
101  document.getElementById("quiz-box").classList.remove("hidden");
102  document.getElementById("result-box").classList.add("hidden");
103
104  startTimer();
105  displayQuestion();
106 }
```

```
108 function showScore() {
109   document.getElementById("quiz-box").classList.add("hidden");
110   document.getElementById("result-box").classList.remove("hidden");
111
112   document.getElementById("score").textContent =
113   | `You scored ${score} out of ${questions.length}!`;
114 }
115
116 // Start automatically
117 startQuiz();
118
119 document.getElementById("next-btn").onclick = nextQuestion;
120
```

