



FACULTY OF COMPUTER SCIENCE AND MATHEMATICS

WEB-BASED INTERFACE DESIGN

CSF3133

SEMESTER 1 SESSION 2025/2026

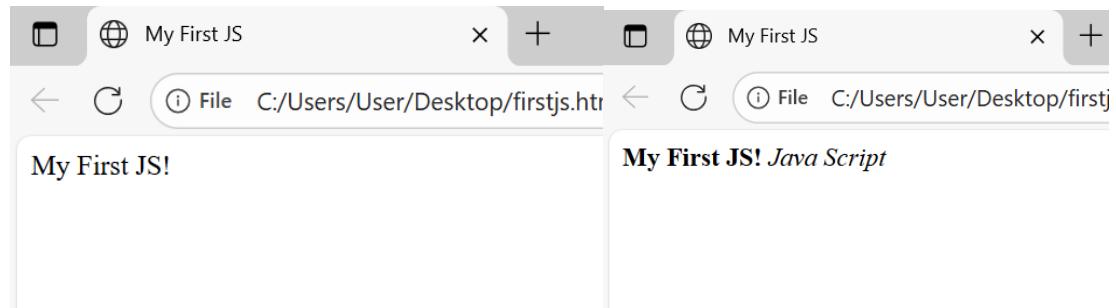
BACHELOR OF COMPUTER SCIENCE (SOFTWARE ENGINEERING) WITH
HONOURS

LAB MODULE 6

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NUR ALIYA FARHANI BINTI MOHD NASRI	S75663

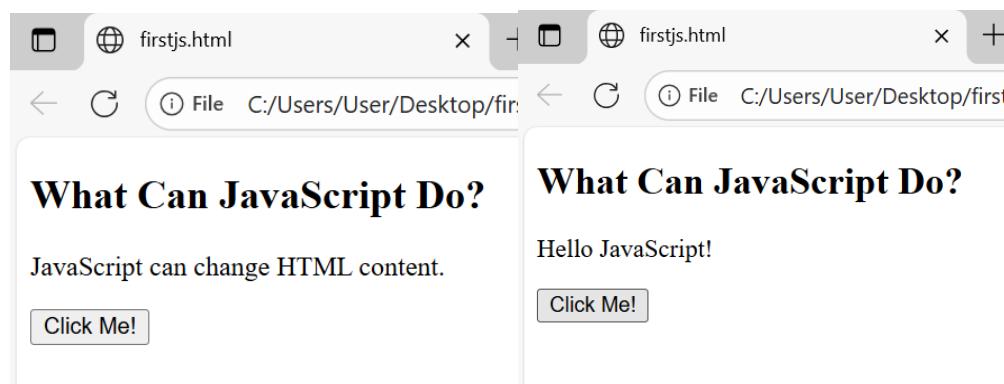
6.3 Basic Javascript

Output:



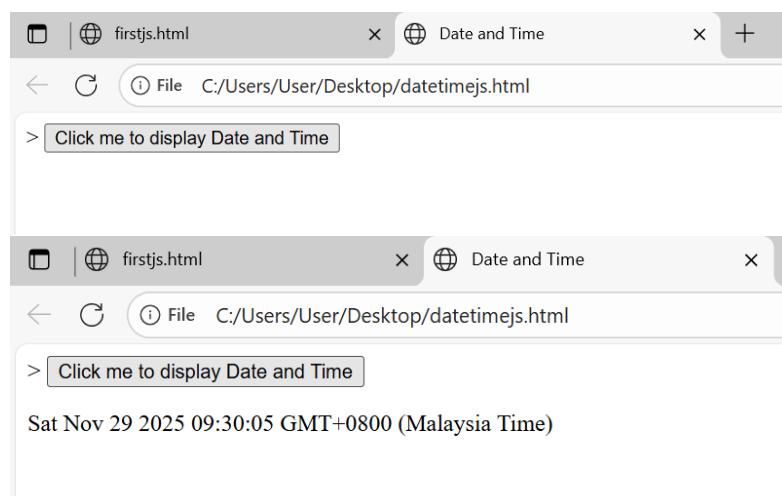
6.4 getElementById()

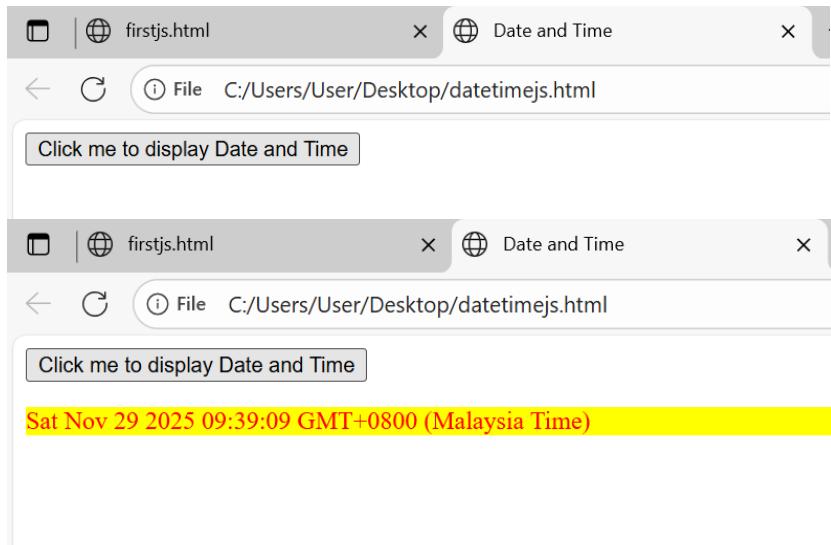
Output:



6.5 Date and Time

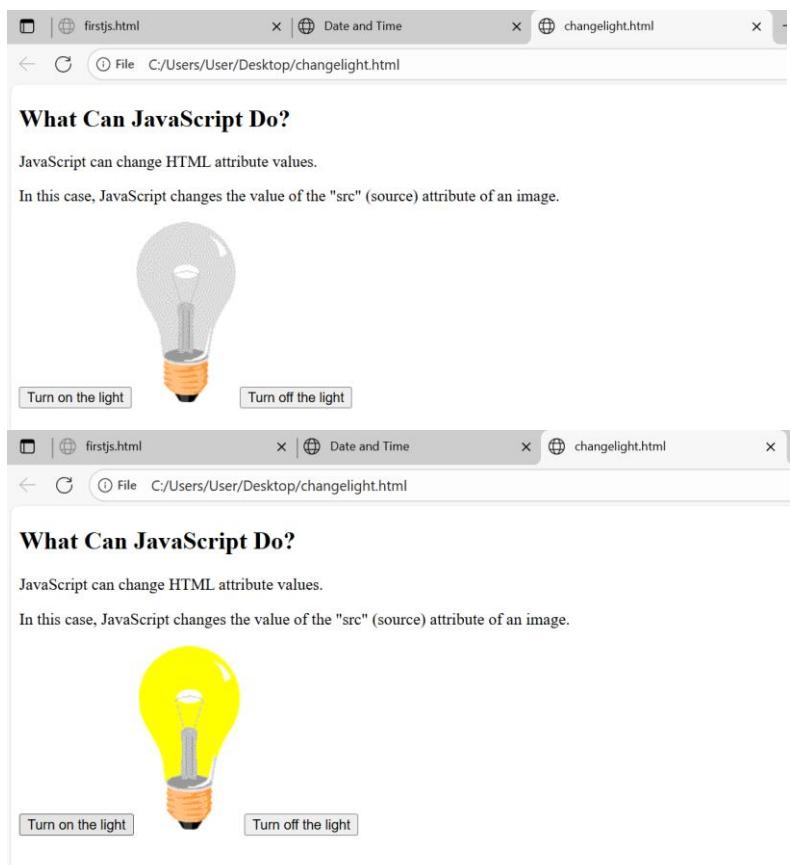
Output:





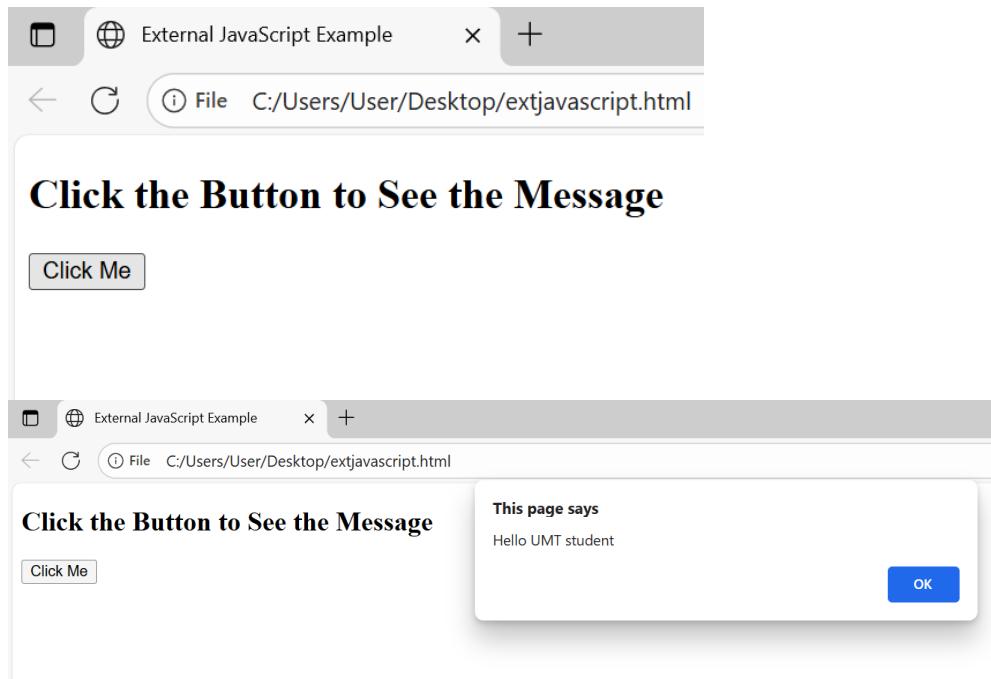
6.6 Change HTML Attribute Values

Output:



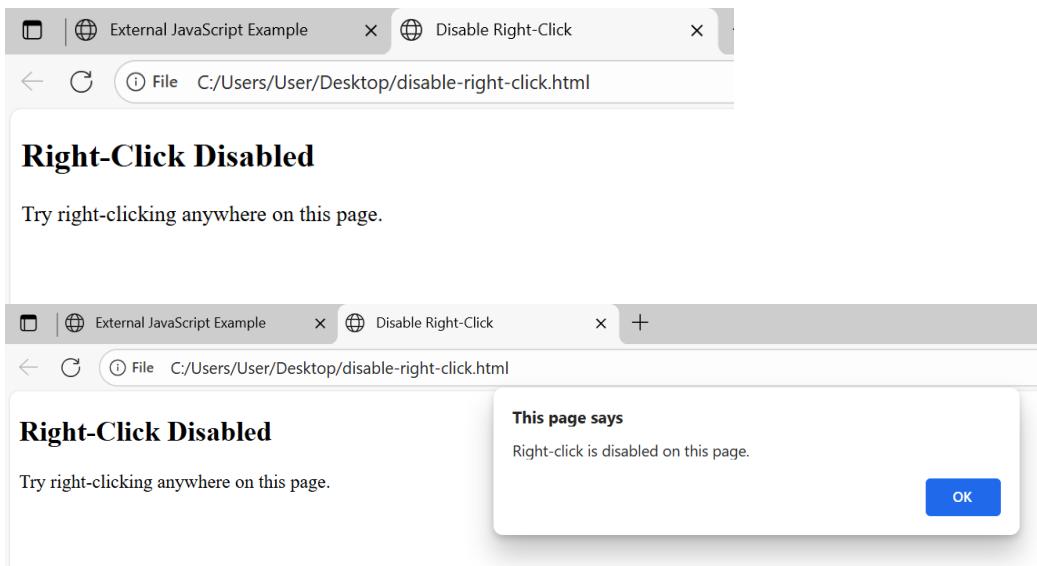
6.7.3 External References

Output:



6.8 Working with events

Output:



6.9 Multiplication Table

Output:



Multiplication Table Generator

Enter number of rows:

Enter number of columns:



Multiplication Table Generator

Enter number of rows:

Enter number of columns:



Multiplication Table Generator

Enter number of rows:

Enter number of columns:

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

6.10.1 Form Validation

Output:

The image contains three screenshots of a web browser window titled "Form Validation Example".

- Screenshot 1:** Shows an empty input field labeled "First Name:" and a green "Submit" button.
- Screenshot 2:** Shows the same page with the URL "C:/Users/User/Desktop/form-validation.html?fname=Yey". A modal dialog box appears with the message "This page says First Name must be filled out." and an "OK" button.
- Screenshot 3:** Shows the same page with the URL "C:/Users/User/Desktop/form-validation.html?fname=Aliya". The input field now contains "Aliya" and the "Submit" button is green.

6.10.2 Numeric Input Validation

Output:

The image contains two screenshots of a web browser window titled "Numeric Input Validation Example".

- Screenshot 1:** Shows an empty input field labeled "Enter Your Age:" with placeholder text "Enter a number" and a green "Submit" button.
- Screenshot 2:** Shows the same page with the URL "C:/Users/User/Desktop/numeric-validation.html". A modal dialog box appears with the message "This page says Age field cannot be empty." and an "OK" button.

The image displays three separate browser windows, each showing a different step in a numeric input validation process.

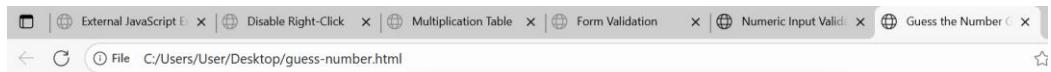
- Screenshot 1:** Shows a form titled "Numeric Input Validation Example". It has a label "Enter Your Age:" and a text input field containing "we". A modal dialog box says "This page says Please enter a valid numeric value." with an "OK" button.
- Screenshot 2:** Shows the same form after the user has entered "12" into the age field. The modal dialog box now says "This page says Form submitted successfully!" with an "OK" button.
- Screenshot 3:** Shows the form again with "300" entered into the age field. The modal dialog box says "This page says Please enter a number between 1 and 120." with an "OK" button.

6.11 Math Function

Output:

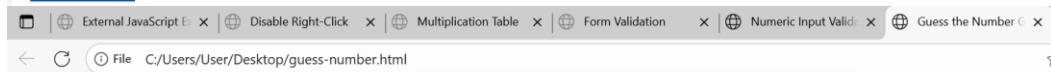
The image shows two browser windows for a "Guess the Number" game.

- Screenshot 1:** The page title is "Guess the Number Game". It contains the text "Try to guess the random number between 1 and 10!" and a large blue "Start Game" button.
- Screenshot 2:** The page title is "Guess the Number Game". It contains the text "Try to guess the random number between 1 and 10!" and a large blue "Start Game" button. To its right, a modal dialog box asks "This page says Guess a number between 1 and 10:" with an input field containing "5", and "OK" and "Cancel" buttons.



Guess the Number Game

Try to guess the random number between 1 and 10!



Guess the Number Game

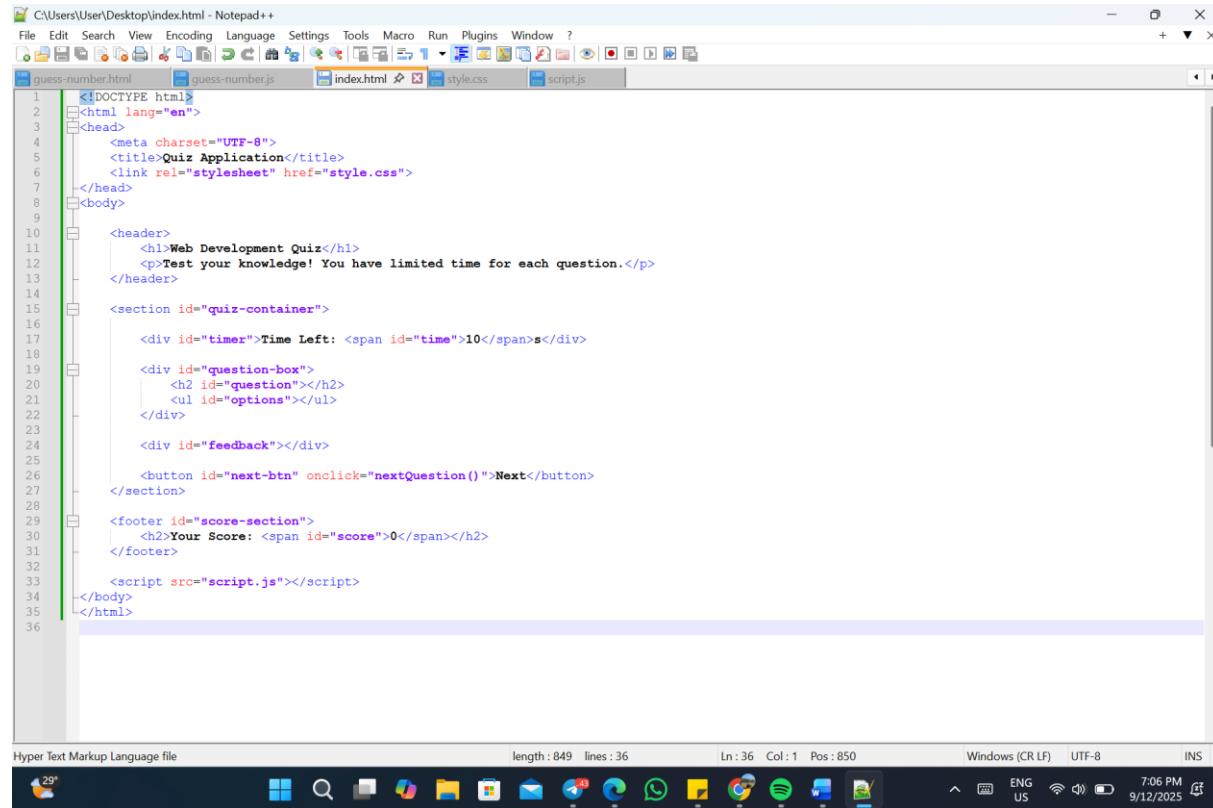
Try to guess the random number between 1 and 10!



6.12 Lab Exercise 6

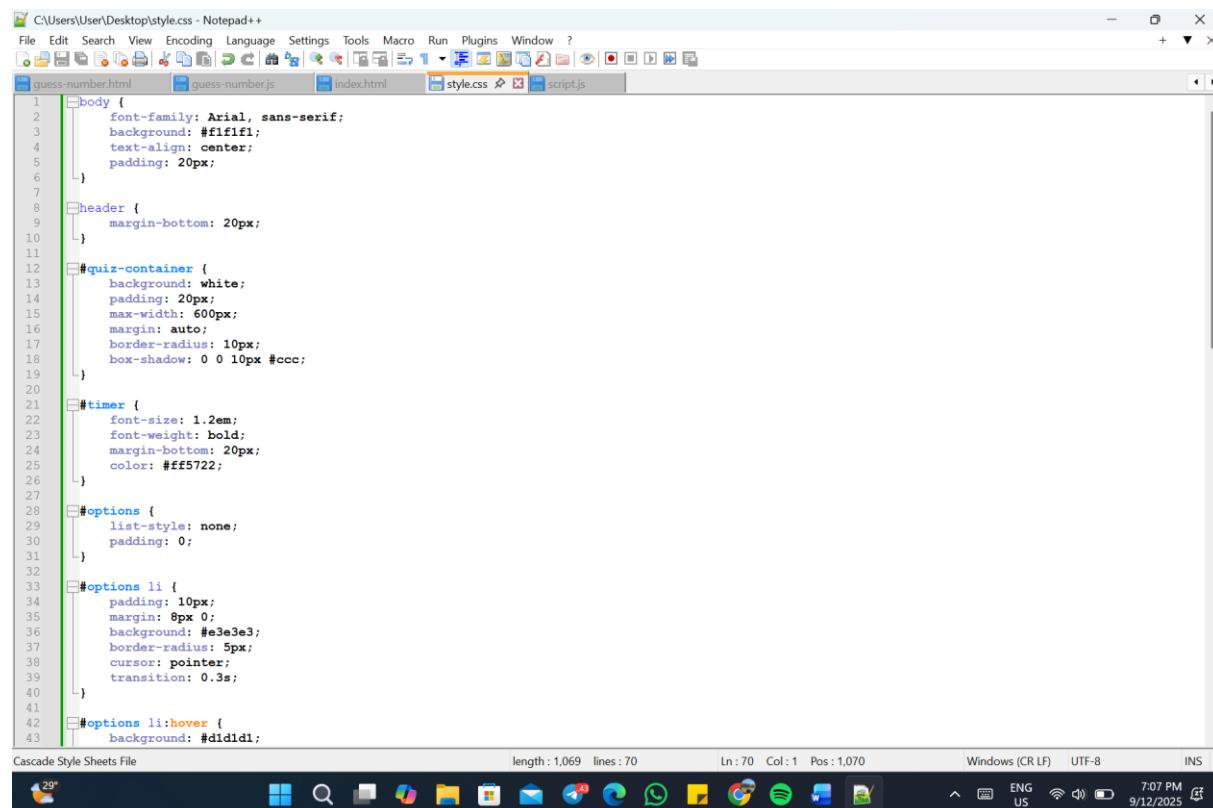
Source Code:

index.html



```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Quiz Application</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <header>
        <h1>Web Development Quiz</h1>
        <p>Test your knowledge! You have limited time for each question.</p>
    </header>
    <section id="quiz-container">
        <div id="timer">Time Left: <span id="time">10</span>s</div>
        <div id="question-box">
            <h2 id="question"></h2>
            <ul id="options"></ul>
        </div>
        <div id="feedback"></div>
        <button id="next-btn" onclick="nextQuestion()">Next</button>
    </section>
    <footer id="score-section">
        <h2>Your Score: <span id="score">0</span></h2>
    </footer>
    <script src="script.js"></script>
</body>
</html>
```

style.css



```
body {
    font-family: Arial, sans-serif;
    background: #f1f1f1;
    text-align: center;
    padding: 20px;
}

header {
    margin-bottom: 20px;
}

#quiz-container {
    background: white;
    padding: 20px;
    max-width: 600px;
    margin: auto;
    border-radius: 10px;
    box-shadow: 0 0 10px #ccc;
}

#timer {
    font-size: 1.2em;
    font-weight: bold;
    margin-bottom: 20px;
    color: #ff5722;
}

#options {
    list-style: none;
    padding: 0;
}

#options li {
    padding: 10px;
    margin: 8px 0;
    background: #e3e3e3;
    border-radius: 5px;
    cursor: pointer;
    transition: 0.3s;
}

#options li:hover {
    background: #d1d1d1;
}
```

```
guess-number.html guess-number.js index.html style.css script.js
40 }
41 }
42 #options li:hover {
43     background: #d1d1d1;
44 }
45
46 #feedback {
47     margin: 15px 0;
48     font-size: 1.2em;
49     height: 25px;
50 }
51
52 #next-btn {
53     padding: 10px 20px;
54     font-size: 1em;
55     background: #2196f3;
56     color: white;
57     border: none;
58     border-radius: 5px;
59     cursor: pointer;
60 }
61
62 #next-btn:hover {
63     background: #0b7dda;
64 }
65
66 footer {
67     margin-top: 20px;
68     font-size: 1.4em;
69 }
70
```

Cascade Style Sheets File length : 1,069 lines : 70 Ln : 70 Col : 1 Pos : 1,070 Windows (CR LF) UTF-8 INS

script.js

```
guess-number.html guess-number.js index.html style.css script.js
1 // Questions Array
2 const questions = [
3     {
4         question: "Which HTML tag is used to create a hyperlink?",
5         options: ["<a>", "<link>", "<href>", "<nav>"],
6         answer: "<a>"
7     },
8     {
9         question: "Which CSS property controls text size?",
10        options: ["font-style", "text-size", "font-size", "text-style"],
11        answer: "font-size"
12    },
13    {
14        question: "Which symbol is used for comments in JavaScript?",
15        options: ["<!-- --&gt;", "//", "/* */", "#"],
16        answer: "//"
17    },
18    {
19        question: "Which function displays messages in JS?",
20        options: ["log()", "print()", "alert()", "echo()"],
21        answer: "alert()"
22    }
23];
24
25 let shuffledQuestions = [];
26 let index = 0;
27 let score = 0;
28 let timer;
29 let timeLeft = 10;
30
31 // Shuffle Questions
32 function shuffleQuestions() {
33     shuffledQuestions = [...questions].sort(() =&gt; Math.random() - 0.5);
34 }
35
36 // Start Timer
37 function startTimer() {
38     timeLeft = 10;
39     document.getElementById("time").textContent = timeLeft;
40
41     timer = setInterval(() =&gt; {
42         timeLeft--;
43         document.getElementById("time").textContent = timeLeft;
44     }, 1000);
45 }</pre>

JavaScript file length : 3,221 lines : 123 Ln : 123 Col : 1 Pos : 3,222 Windows (CR LF) UTF-8 INS


```

```
guess-number.html guess-number.js index.html style.css script.js
34
35
36 // Start Timer
37 function startTimer() {
38     timeLeft = 10;
39     document.getElementById("time").textContent = timeLeft;
40
41     timer = setInterval(() => {
42         timeLeft--;
43         document.getElementById("time").textContent = timeLeft;
44
45         if (timeLeft <= 0) {
46             clearInterval(timer);
47             document.getElementById("feedback").textContent = "Time's up!";
48             disableOptions();
49         }
50     }, 1000);
51
52
53 // Display Question
54 function displayQuestion() {
55     const q = shuffledQuestions[index];
56     document.getElementById("question").textContent = q.question;
57
58     const optionsList = document.getElementById("options");
59     optionsList.innerHTML = "";
60
61     q.options.forEach(option => {
62         let li = document.createElement("li");
63         li.textContent = option;
64         li.onclick = () => checkAnswer(option, li);
65         optionsList.appendChild(li);
66     });
67
68
69 // Check Answer
70 function checkAnswer(selected, element) {
71     clearInterval(timer);
72     const correct = shuffledQuestions[index].answer;
73
74     if (selected === correct) {
75         score++;
76         document.getElementById("feedback").textContent = "Correct!";
77     }
78
79     else {
80         document.getElementById("feedback").textContent = "Wrong!";
81     }
82
83     disableOptions();
84
85
86 // Disable options after answer
87 function disableOptions() {
88     const options = document.querySelectorAll("#options li");
89     options.forEach(li => li.onclick = null);
90 }
91
92 // Next Question
93 function nextQuestion() {
94     index++;
95
96     if (index < shuffledQuestions.length) {
97         document.getElementById("feedback").textContent = "";
98         displayQuestion();
99         startTimer();
100    } else {
101        finishQuiz();
102    }
103
104    document.getElementById("score").textContent = score;
105
106
107 // Finish Quiz
108 function finishQuiz() {
109     clearInterval(timer);
110 }
```

```
guess-number.html guess-number.js index.html style.css script.js
67
68
69 // Check Answer
70 function checkAnswer(selected, element) {
71     clearInterval(timer);
72     const correct = shuffledQuestions[index].answer;
73
74     if (selected === correct) {
75         score++;
76         document.getElementById("feedback").textContent = "Correct!";
77         element.style.backgroundColor = "#4CAF50";
78     } else {
79         document.getElementById("feedback").textContent = "Wrong!";
80         element.style.backgroundColor = "#f44336";
81     }
82
83     disableOptions();
84
85
86 // Disable options after answer
87 function disableOptions() {
88     const options = document.querySelectorAll("#options li");
89     options.forEach(li => li.onclick = null);
90 }
91
92 // Next Question
93 function nextQuestion() {
94     index++;
95
96     if (index < shuffledQuestions.length) {
97         document.getElementById("feedback").textContent = "";
98         displayQuestion();
99         startTimer();
100    } else {
101        finishQuiz();
102    }
103
104    document.getElementById("score").textContent = score;
105
106
107 // Finish Quiz
108 function finishQuiz() {
109     clearInterval(timer);
110 }
```

The screenshot shows a Notepad++ window with the file `script.js` open. The code is a JavaScript script for a quiz application. It includes functions for starting the quiz, displaying questions, and finishing the quiz with a final score message. The code uses document.getElementById to select elements and manipulate their innerHTML. The Notepad++ interface includes tabs for other files like `guess-number.html`, `index.html`, and `style.css`. The status bar at the bottom provides information about the file length, lines, and position.

```
94 index++;
95
96 if (index < shuffledQuestions.length) {
97     document.getElementById("feedback").textContent = "";
98     displayQuestion();
99     startTimer();
100 } else {
101     finishQuiz();
102 }
103
104     document.getElementById("score").textContent = score;
105 }
106
107 // Finish Quiz
108 function finishQuiz() {
109     clearInterval(timer);
110     document.getElementById("quiz-container").innerHTML =
111         "<h2>Quiz Finished!</h2><p>Your final score is: <strong>${score}</strong></p>";
112 }
113
114 // Start Quiz
115 function startQuiz() {
116     shuffleQuestions();
117     displayQuestion();
118     startTimer();
119 }
120
121 // Start immediately
122 startQuiz();
```

Output:

The screenshot shows a web browser window titled "Quiz Application". The page title is "Web Development Quiz". A message at the top says "Test your knowledge! You have limited time for each question." Below it, a red box displays "Time Left: 7s". A question asks "Which symbol is used for comments in JavaScript?". Four options are listed in a dropdown menu: "<!-- -->", "//", "/* */", and "#". A blue "Next" button is at the bottom right of the dropdown.

Your Score: 0

This screenshot is identical to the first one, showing the same quiz interface. However, the second option, "//", is highlighted with a green background, indicating it is the correct answer. Below the dropdown, the text "Correct!" is displayed in green. The rest of the interface is identical to the first screenshot.

Your Score: 0

Quiz Application

File C:/Users/User/Desktop/index.html

Web Development Quiz

Test your knowledge! You have limited time for each question.

Time Left: 7s

Which HTML tag is used to create a hyperlink?

<a>

<link>

<href>

<nav>

Wrong!

Next

Your Score: 1

Quiz Application

File C:/Users/User/Desktop/index.html

Web Development Quiz

Test your knowledge! You have limited time for each question.

Quiz Finished!

Your final score is: 2

Your Score: 2

