

Name: \_\_Racy Jhanna Ledres\_\_\_\_\_ Date: \_November. 08, 2025\_\_  
Course and Section: \_BSIS-3A\_\_\_\_\_ Score: \_\_\_\_\_

## Laboratory Activity 8:

### Instructions:

1. Use JavaScript to perform input/output and interactive quizzes.
  2. Manipulate HTML elements and respond to user events.
  3. Create an interactive quiz that asks the user a question and gives feedback based on their answer.
- 

### HTML (main.html):

```
<!DOCTYPE html>

<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<!--This is the title of the web page displayed in the browser tab-->
<title>SheCodes</title>

<!-- Links an external CSS file for styling the webpage-->
<link rel="stylesheet" href="stylesheet.css">
</head>
<body>
<!--Logo Section-->
<div class="logo">
    SheCodes
</div>

<!-- Main container for the quiz application. this is the white part sa html page-->
<div class="app">
    <h1>Web Development General Quiz</h1>
    <div class="quiz"> <!-- This container holds the question and answers -->
```

```

<h2 id="question">Question goes here</h2> <!-- Placeholder for displaying current questions-->
<div id="answer-buttons"> <!-- Container for answer buttons-->
    <!-- Each button represents the possible answer choice-->
    <button class="btn">Answer 1</button>
    <button class="btn">Answer 2</button>
    <button class="btn">Answer 3</button>
    <button class="btn">Answer 4</button>
</div>
<!--This is the button to move to the next question after answering-->
<button id="next-btn">Next</button>
</div>
</div>
<!--This is the background container. The gridline pattern background -->
<div class="bgcontainer"></div>
<script src="quizscript.js"></script>
</body>
</html>

```

## JavaScript (quizscript.js)

```

// This is the Quiz Question and Answer Data
// each questions has an array of possible answers
// with a 'correct' property to indicate the right answer
// Each answer contains the answer text and whether it is correct or not
const questions = [
    {
        question: "What does HTML stand for?",
        answers: [
            { text: "Hyper Text Markup Language", correct: true },
            { text: "High Text Machine Language", correct: false },
            { text: "Hyperlink Text Mark Language", correct: false },
        ]
    }
]

```

```
{ text: "Home Tool Markup Language", correct: false }
]
},
{
question: "Which language is used for styling web pages?",  
answers: [
  { text: "HTML", correct: false },
  { text: "JQuery", correct: false },
  { text: "CSS", correct: true },
  { text: "Python", correct: false }
]
},
{
question: "Which is a JavaScript framework?",  
answers: [
  { text: "React", correct: true },
  { text: "Laravel", correct: false },
  { text: "Django", correct: false },
  { text: "Flask", correct: false }
]
},
{
question: "Which method is used to log messages to the console in JavaScript?",  
answers: [
  { text: "console.log()", correct: true },
  { text: "print()", correct: false },
  { text: "echo()", correct: false },
  { text: "write()", correct: false }
]
```

```
],
},
{

question: "Which symbol is used for comments in JavaScript?",  

answers: [  

  { text: "//", correct: true },  

  { text: "/*", correct: false },  

  { text: "#", correct: false },  

  { text: "<!-- -->", correct: false }  

]  
},  
  
{  
question: "What does CSS stand for?",  
answers: [  

  { text: "Cascading Style Sheets", correct: true },  

  { text: "Colorful Style Sheets", correct: false },  

  { text: "Creative Style System", correct: false },  

  { text: "Computer Style Sheets", correct: false }  

]  
}  
];  
  
//the DOM Element References  
  
//Grabs HTML elements by their IDs to manipulate them later  
const questionElement = document.getElementById("question");  
const answerButtonsElement = document.getElementById("answer-buttons");  
const nextButton = document.getElementById("next-btn");
```

```
//Quiz state variables

//Tracks which question the user is on and their score
let currentQuestionIndex = 0;
let score = 0;

//Start Quiz function. This function initializes the quiz
//by resetting the question index and score, updating the next button text,
//and displaying the first question.
function startQuiz() {
    currentQuestionIndex = 0;
    score = 0;
    nextButton.innerHTML = "Next";
    showQuestion();
};

// Display Question function. This function displays the current question
// and its possible answers. It resets the state, sets the question text,
// creates buttons for each answer, and adds event listeners to handle answer selection.
function showQuestion() {
    //Clear previous question and answers
    resetState();

    //Get current question based on the index
    let currentQuestion = questions[currentQuestionIndex];

    //Display question number and text
    let questionNo = currentQuestionIndex + 1;
    questionElement.innerHTML = questionNo + ". " + currentQuestion.question;
```

```
//Create and displays buttons for each answer
currentQuestion.answers.forEach(answer => {
    const button = document.createElement("button");
    button.innerHTML = answer.text; // Set button text to answer text
    button.classList.add("btn"); // Add CSS class for styling
    answerButtonsElement.appendChild(button); // Add button to the answer buttons container

    // Store whether the answer is correct in a data attribute
    if (answer.correct) {
        button.dataset.correct = answer.correct;
    }

    // Add click event listener to check the answer when clicked
    button.addEventListener("click", selectAnswer);
});

};

//Reset State function. This function clears the previous question and answers
function resetState() {
    nextButton.style.display = "none"; // Hide the next button
    //Remove all answer buttons
    while (answerButtonsElement.firstChild) {
        answerButtonsElement.removeChild(answerButtonsElement.firstChild);
    }
}

//Select Answer function. This function handles the logic when an answer is selected
function selectAnswer(e){
    const selectedButton = e.target; // the button that was clicked
```

```

const isCorrect = selectedButton.dataset.correct === "true"; // eto yung checker if the answer is
correct or not

// This handles the visual feedback and score updating based on the selected answer
if (isCorrect) {
    selectedButton.classList.add("correct");
    score++; // So if the answer is correct, increase the score by 1
} else {
    selectedButton.classList.add("wrong");
}

//Highlight the correct answer and disable all buttons after an answer is selected
Array.from(answerButtonsElement.children).forEach(button => {
    if (button.dataset.correct === "true") {
        button.classList.add("correct");
    }
    button.disabled = true; // this disables all buttons and prevent further clicks
});

//Show the next button after an answer is selected
nextButton.style.display = "block";
}

//Show Score function. This function displays the user's final score
function showScore() {
    resetState();
    questionElement.innerHTML = `You scored ${score} out of ${questions.length}!`;
    nextButton.innerHTML = "Play Again"; // Changes the next button text to "Play Again"
    nextButton.style.display = "block"; // Shows the "Play Again" button
}

// Handle Next Button function. This function manages the transition to the next question or the end of
the quiz

```

```

function handleNextButton() {
    currentQuestionIndex++;
    if (currentQuestionIndex < questions.length) {
        // Show the next question if there are more questions
        showQuestion();
    } else { // there's no more questions, then it will display the final score
        showScore();
    }
}

// next Button Event Listener
// This listens for clicks on the next button and either moves to the next question or restarts the quiz
nextButton.addEventListener("click", () => {
    if(currentQuestionIndex < questions.length) {
        handleNextButton();
    } else {
        startQuiz();
    }
});

//Start the quiz when the page loads
startQuiz();

```

**Be guided with the following Rubrics:**

Criteria	Points	Notes	Score
<b>Functionality</b>	20	Quiz works correctly	
<b>Use of JS Syntax</b>	20	Proper use of variables and events	
<b>DOM Manipulation</b>	20	Feedback updates dynamically	
<b>Creativity</b>	20	Engaging question and design	
<b>Code Comments &amp; Clarity</b>	20	Well commented and organized code	