Practical 12 - WT

JavaScript Functions and Events
Task: Interactive Quiz

- Objective: Develop an interactive quiz using JavaScript functions and events.
- Activities:
- Create multiple-choice questions in HTML.
- Use JavaScript functions to check answers and display results.
- Implement event listeners for user interactions.

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Interactive Quiz</title>
    <link rel="stylesheet" href="pr122.css">
</head>
<body>
    <h1>Interactive Quiz</h1>
    <div id="quiz-container">
        <div id="question"></div>
        <ul id="choices"></ul>
        <button id="submit">Submit Answer</button>
        <div id="result"></div>
    </div>
    <script src="pr1222.js"></script>
</body>
</html>
```

```css
body {
    font-family: Arial, sans-serif;
    background-color: #f4f4f4;
    padding: 20px;
}

#quiz-container {
    background: white;
    padding: 20px;
    border-radius: 5px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}

button {
```

```
    margin-top: 10px;
}
```

```javascript
const questions = [
    {
        question: "What is the capital of France?",
        choices: ["Berlin", "Madrid", "Paris", "Lisbon"],
        answer: "Paris"
    },
    {
        question: "Which planet is known as the Red Planet?",
        choices: ["Earth", "Mars", "Jupiter", "Saturn"],
        answer: "Mars"
    },
    {
        question: "What is the largest ocean on Earth?",
        choices: ["Atlantic Ocean", "Indian Ocean", "Arctic Ocean", "Pacific
Ocean"],
        answer: "Pacific Ocean"
    }
];

let currentQuestionIndex = 0;

function loadQuestion() {
    const questionElement = document.getElementById('question');
    const choicesElement = document.getElementById('choices');

    choicesElement.innerHTML = '';


    const currentQuestion = questions[currentQuestionIndex];
    questionElement.innerText = currentQuestion.question;

    currentQuestion.choices.forEach(choice => {
        const li = document.createElement('li');
        li.innerText = choice;
        li.onclick = selectAnswer;
        choicesElement.appendChild(li);
    });
}

let selectedAnswer = '';

function selectAnswer(event) {
    const choices = document.querySelectorAll('#choices li');
    choices.forEach(choice => choice.classList.remove('selected'));
```

```javascript
    event.target.classList.add('selected');
    selectedAnswer = event.target.innerText;
}

document.getElementById('submit').onclick = function() {
    const resultElement = document.getElementById('result');
    if (selectedAnswer === '') {
        resultElement.innerText = "Please select an answer.";
        return;
    }

    if (selectedAnswer === questions[currentQuestionIndex].answer) {
        resultElement.innerText = "Correct!";
    } else {
        resultElement.innerText = `Wrong! The correct answer is:
${questions[currentQuestionIndex].answer}`;
    }

    currentQuestionIndex++;
    if (currentQuestionIndex < questions.length) {
        loadQuestion();
    } else {
        resultElement.innerText += " Quiz completed!";
        document.getElementById('submit').disabled = true;
    }

    selectedAnswer = '';


loadQuestion();
```

Interactive Quiz

Which planet is known as the Red Planet?

- Earth
- Mars
- Jupiter
- Saturn

Submit Answer
Wrong! The correct answer is: Paris

Learning outcomes:-

- Learners will grasp how to structure an HTML document for dynamic content, including using elements like `<div>`, `<ul>`, and `<button>`. They'll understand the importance of semantic markup in building interactive web applications.

  Participants will deepen their understanding of JavaScript fundamentals, including variables, functions, arrays, and objects. They'll learn how to manipulate the DOM using methods like `innerText`, `appendChild`, and event handling.

- Learners will gain practical experience in implementing event listeners and handling user interactions. They'll understand how to respond to user actions, such as clicking on choices and submitting answers, enhancing their skills in creating interactive web applications.

- By developing the quiz logic, participants will learn how to use conditional statements to check answers and manage application flow. They'll understand how to control the user experience by dynamically updating the content based on user input and maintaining state throughout the quiz process.