

PROJECT- 2

Interactive Quiz Application

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Objective

The goal of this project was to develop an interactive quiz application that allows users to answer multiple-choice questions and receive a final score based on their responses.

Technologies Used

HTML

CSS

JavaScript

Key Features

Multiple-choice questions

Instant user interaction

Score calculation and display at the end

User-friendly and interactive interface

Contents of index.html

The screenshot shows a code editor interface with a dark theme. The left sidebar contains icons for File, Edit, Selection, View, Go, Run, and a search bar. Below these are sections for EXPLORER, OUTLINE, and TIMELINE. The EXPLORER section shows a file tree with a folder named 'quiz-app' containing 'ecommerce-react', 'html', and 'index.html'. The 'index.html' file is selected and highlighted with a blue border. The OUTLINE section shows a single item: 'index.html'. The TIMELINE section shows two workspace entries: one for 41 mins and another for 46 mins. The main editor area displays the HTML code for 'index.html'. The code includes a progress bar with a fill bar and a button labeled 'Next'. A script tag at the bottom points to 'script.js'. The code is numbered from 1 to 35.

```
<html lang="en">
<body>
    <div class="quiz-container">
        <div id="progress">Question 1 of 5</div>
        <div id="progress">Question 1 of 5</div>

        <!-- Progress Bar -->
        <div class="progress-bar">
            <div class="progress-fill" id="progressFill"></div>
        </div>

        <div id="question"></div>

        <div id="answers"></div>

        <button id="nextBtn">Next</button>
    </div>

    <div id="result-container" class="hidden"></div>

    <script src="script.js"></script>
</body>
</html>
```

Contents of script.js

```
index.html ...\\quiz-app # style.css JS script.js ...\\quiz-app ● README.md in
html > quiz-app > JS script.js > showResults
1  const quizData = [
2    {
3      question: "What does HTML stand for?",
4      options: [
5        "Hyper Text Markup Language",
6        "High Text Machine Language",
7        "Hyperlinks Text Mark Language",
8        "None of the above"
9      ],
10     correct: 0
11   },
12   {
13     question: "Which language is used for styling web pages?",
14     options: ["HTML", "JQuery", "CSS", "XML"],
15     correct: 2
16   },
17   {
18     question: "Which is not a JavaScript framework?",
19     options: ["React", "Angular", "Vue", "Django"],
20     correct: 3
21   },
22   {
23     question: "Which symbol is used for comments in JS?",
24     options: ["/", "<!-- --&gt;", "#", "***"],
25     correct: 0
26   },
27   {
28     question: "Which keyword declares a variable in JS?",
29     options: ["int", "var", "float", "string"],
30     correct: 1
31   }
32 ];</pre>
```

```
33 quizData.sort(() => Math.random() - 0.5);
34 let currentQuestion = 0;
35 let score = 0;
36 let selectedAnswer = null;
37 let summary = [];
38 const progressFill = document.getElementById("progressFill");
39 const questionEl = document.getElementById("question");
40 const answersEl = document.getElementById("answers");
41 const nextBtn = document.getElementById("nextBtn");
42 const progressEl = document.getElementById("progress");
43 const resultContainer = document.getElementById("result-container");
44 const quizContainer = document.querySelector(".quiz-container");
45 loadQuestion();
46 function loadQuestion() {
47   answersEl.innerHTML = "";
48   selectedAnswer = null;
49   const q = quizData[currentQuestion];
50   questionEl.textContent = q.question;
51   progressEl.textContent = `Question ${currentQuestion + 1} of ${quizData.length}`;
52   const shuffledOptions = [...q.options].sort(() => Math.random() - 0.5);
53   shuffledOptions.forEach(option => {
54     const div = document.createElement("div");
55     div.textContent = option;
56     div.classList.add("answer");
57     div.onclick = () =>
      selectAnswer(div, q.options.indexOf(option));
```

```

58     answersEl.appendChild(div);
59   });
60   const progressPercent =
61     (currentQuestion / quizData.length) * 100;
62   progressFill.style.width = `${progressPercent}%`;
63   nextBtn.textContent =
64     currentQuestion === quizData.length - 1 ? "View Results" : "Next";
65 }
66 function selectAnswer(element, index) {
67   if (selectedAnswer !== null) return;
68   selectedAnswer = index;
69   const correctIndex = quizData[currentQuestion].correct;
70   document.querySelectorAll(".answer").forEach(btn => btn.style.pointerEvents = "none");
71   if (index === correctIndex) {
72     element.classList.add("correct");
73     score++;
74     summary.push(true);
75   } else {
76     element.classList.add("wrong");
77     document.querySelectorAll(".answer")[correctIndex].classList.add("correct");
78     summary.push(false);
79   }
80 }
81 nextBtn.onclick = () => {
82   if (selectedAnswer === null) return alert("Please select an answer");
83   currentQuestion++;
84   if (currentQuestion < quizData.length) {

```

```

84     if (currentQuestion < quizData.length) {
85       loadQuestion();
86     } else {
87       showResults();
88     }
89   };
90   function showResults() (parameter) q: {
91     question: string;
92     quizContainer.clas
93     resultContainer.cl
94     let html = `<h2>Yo
95     quizData.forEach((q, i) => {
96       html += `<li>${q.question} -
97       ${summary[i] ? "✓ Correct" : "✗ Wrong"}</li>`;
98     });
99     html += `</ul>
100    <button onclick="location.reload()">Restart Quiz</button>`;
101   resultContainer.innerHTML = html;
102 }


```

Contents of style.css

```
html > quiz-app > # style.css > .progress-bar
1 body {
2     font-family: Arial, sans-serif;
3     background: #f4f4f4;
4     display: flex;
5     justify-content: center;
6     align-items: center;
7     min-height: 100vh;
8 }
9 .quiz-container {
10     background: white;
11     padding: 20px;
12     width: 400px;
13     border-radius: 8px;
14     box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
15 }
16 #question {
17     font-size: 18px;
18     margin-bottom: 15px;
19 }
20 .answer {
21     background: #eee;
22     padding: 10px;
23     margin: 5px 0;
24     border-radius: 5px;
25     cursor: pointer;
26 }
27 .answer:hover {
28     background: #ddd;
29 }
```

```
30 .correct {
31     background: #4CAF50;
32     color: white;
33 }
34 .wrong {
35     background: #f44336;
36     color: white;
37 }
38 button {
39     margin-top: 15px;
40     padding: 10px;
41     width: 100%;
42     background: #007bff;
43     color: white;
44     border: none;
45     border-radius: 5px;
46     cursor: pointer;
47 }
48 button:hover {
49     background: #0056b3;
50 }
51 .hidden {
52     display: none;
53 }
54 #result-container {
55     background: white;
56     padding: 20px;
57     width: 400px;
58     border-radius: 8px;
59 }
```

```
60 .progress-bar {
61     width: 100%;
62     height: 10px;
63     background: #ddd;
64     border-radius: 5px;
65     margin: 10px 0 20px;
66     overflow: hidden;
67 }
68 .progress-fill {
69     height: 100%;
70     width: 0;
71     background: #4CAF50;
72     transition: width 0.3s ease;
73 }
```

❖ Implementation Details

The quiz logic was implemented using JavaScript arrays and objects to store questions, options, and correct answers. Event listeners were used to capture user responses. The application dynamically displays questions and tracks the user's score. At the end of the quiz, the total score is calculated and shown to the user. CSS was used to style buttons, questions, and layout for better usability.

Challenges & Solutions

Handling user input validation and preventing multiple submissions were challenging. This was solved by disabling options after selection and managing quiz flow using conditional logic.

Outcome

This project strengthened my skills in JavaScript logic building, event handling, and state management in web applications.

Layout of the quiz application

The screenshot shows a quiz application window titled "Quiz Application". At the top, it displays "Question 1 of 5" twice. Below the title, the question "What does HTML stand for?" is asked. Four options are listed: "Hyperlinks Text Mark Language", "Hyper Text Markup Language", "High Text Machine Language", and "None of the above". The second option, "Hyper Text Markup Language", is highlighted with a green background, indicating it is the correct answer. At the bottom of the window is a blue "Next" button.

If the answer is correct

This screenshot is identical to the one above, showing the same quiz application window with the first question about HTML. The correct answer, "Hyper Text Markup Language", is highlighted with a green background. A progress bar at the top is partially filled with green, representing the completion of the first question.

If the opted answer is wrong it also shows you the right option!

The screenshot shows the quiz application again, but this time it is Question 4 of 5. The question asks "Which symbol is used for comments in JS?". Four options are listed: "//", "**", "#", and "<!-- -->". The first option, "//", is highlighted with a green background, indicating it is the correct answer. A progress bar at the top is almost fully filled with green, representing the completion of four questions.

The total score

Your Score: 2 / 5

- Which is not a JavaScript framework? - ✓ Correct
- Which language is used for styling web pages? - ✓ Correct
- What does HTML stand for? - ✗ Wrong
- Which symbol is used for comments in JS? - ✗ Wrong
- Which keyword declares a variable in JS? - ✗ Wrong

Restart Quiz

To restart the quiz

Also shows you which one
is
right and wrong