

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

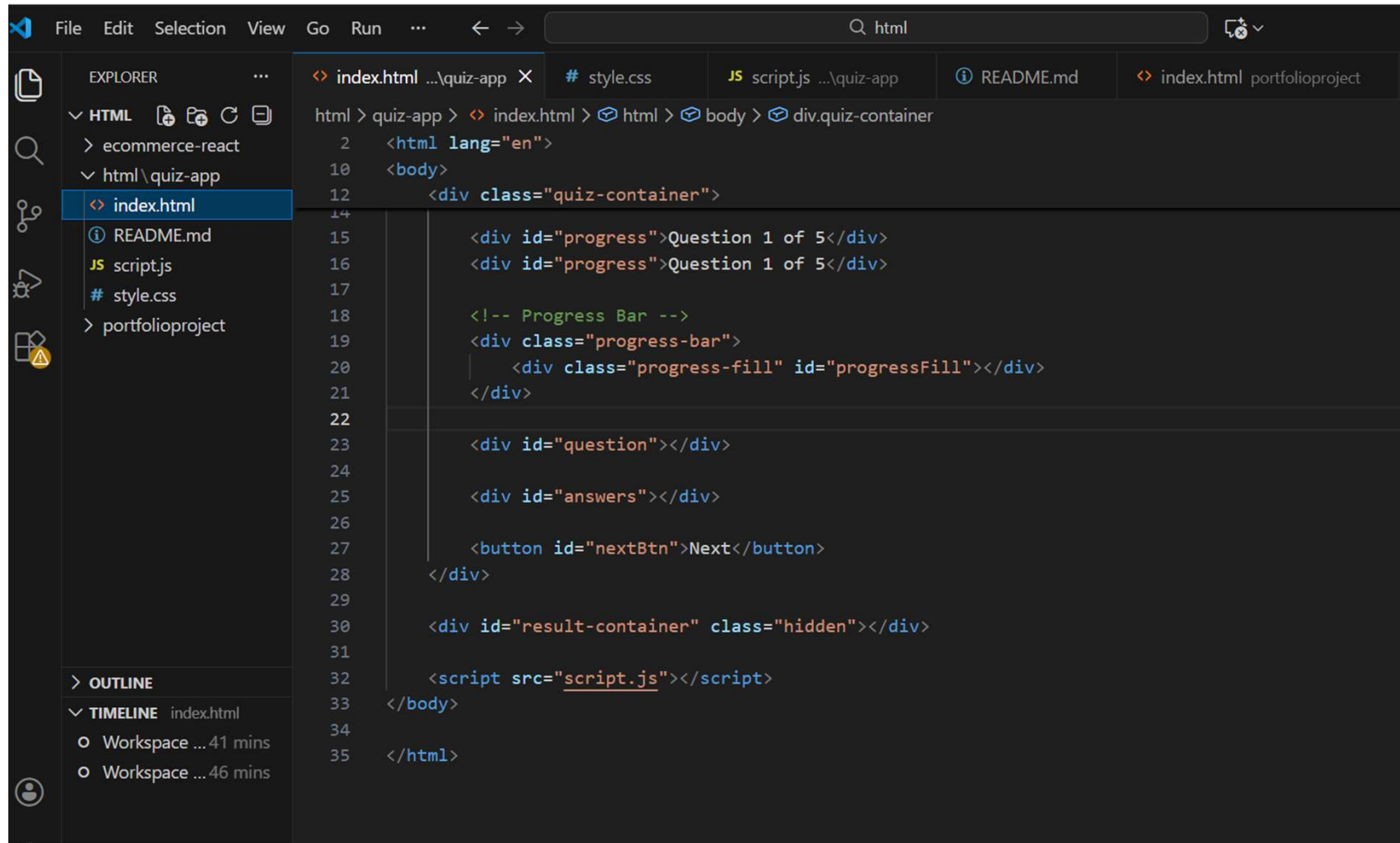
Multiple-choice questions

Instant user interaction

Score calculation and display at the end

User-friendly and interactive interface

Contents of index.html



The image shows a screenshot of the Visual Studio Code editor interface. The Explorer panel on the left shows the file structure of a project named 'portfolioproject'. The file 'index.html' is selected. The main editor area displays the contents of 'index.html', which is a single-page application template for a quiz. The code includes HTML tags for the document structure, a progress bar, a question container, an answers container, a next button, and a hidden result container. It also includes a script tag for 'script.js'.

```
2 <html lang="en">
10 <body>
12   <div class="quiz-container">
14
15     <div id="progress">Question 1 of 5</div>
16     <div id="progress">Question 1 of 5</div>
17
18     <!-- Progress Bar -->
19     <div class="progress-bar">
20       <div class="progress-fill" id="progressFill"></div>
21     </div>
22
23     <div id="question"></div>
24
25     <div id="answers"></div>
26
27     <button id="nextBtn">Next</button>
28   </div>
29
30   <div id="result-container" class="hidden"></div>
31
32   <script src="script.js"></script>
33 </body>
34
35 </html>
```

Contents of script.js

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

```
30 }
31 ];
32 quizData.sort(() => Math.random() - 0.5);
33 let currentQuestion = 0;
34 let score = 0;
35 let selectedAnswer = null;
36 let summary = [];
37 const progressFill = document.getElementById("progressFill");
38 const questionEl = document.getElementById("question");
39 const answersEl = document.getElementById("answers");
40 const nextBtn = document.getElementById("nextBtn");
41 const progressEl = document.getElementById("progress");
42 const resultContainer = document.getElementById("result-container");
43 const quizContainer = document.querySelector(".quiz-container");
44 loadQuestion();
45 function loadQuestion() {
46     answersEl.innerHTML = "";
47     selectedAnswer = null;
48     const q = quizData[currentQuestion];
49     questionEl.textContent = q.question;
50     progressEl.textContent = `Question ${currentQuestion + 1} of ${quizData.length}`;
51     const shuffledOptions = [...q.options].sort(() => Math.random() - 0.5);
52     shuffledOptions.forEach(option => {
53         const div = document.createElement("div");
54         div.textContent = option;
55         div.classList.add("answer");
56         div.onclick = () =>
57             selectAnswer(div, q.options.indexOf(option));
58     });
59 }
```

```

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     progressFill.style      question: string;
92     quizContainer.clas     options: string[];
93     resultContainer.cl     correct: number;
94     let html = `<h2>You }      quizData.length}</h2><ul>`;
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 }
```

```
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

Quiz Application

Question 1 of 5
Question 1 of 5

What does HTML stand for?

Hyperlinks Text Mark Language

Hyper Text Markup Language

High Text Machine Language

None of the above

Next

If the answer is correct

Quiz Application

Question 1 of 5
Question 1 of 5

What does HTML stand for?

Hyperlinks Text Mark Language

Hyper Text Markup Language

High Text Machine Language

None of the above

Next

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

Quiz Application

Question 4 of 5
Question 1 of 5

Which symbol is used for comments in JS?

//

**

#

<!-- -->

Next

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

Also shows you which one
is
right and wrong

To restart the quiz