**Source Code**

Online Test Application

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**Online Test.Js**

import React, { useEffect, useState } from "react";

import axios from "axios";

function OnlineTest() {

const [questions, setQuestions] = useState([]);

const [answers, setAnswers] = useState([]);

const [score, setScore] = useState(0);

const [showSummary, setShowSummary] = useState(false);

useEffect(() => {

axios

.get("http://localhost:3000/questions")

.then((result) => {

setQuestions(result.data);

})

.catch((error) => {

console.log(error);

});

axios

.get("http://localhost:3000/answers")

.then((result) => {

setAnswers(result.data);

})

.catch((error) => {

console.log(error);

});

}, []);

const [selectedAnswers, setSelectedAnswers] = useState(new Map());

const handleAnswerSelection = (event, qid, ans) => {

setSelectedAnswers((prevSelectedAnswers) => {

const updatedSelectedAnswers = new Map(prevSelectedAnswers);

updatedSelectedAnswers.set(qid, ans);

return updatedSelectedAnswers;

});

};

const handleSubmit = () => {

let userScore = 0;

selectedAnswers.forEach((selectedAnswer, qid) => {

const correctAnswer = answers.find((answer) => answer.qid === qid)?.correctAns;

if (String(selectedAnswer) === String(correctAnswer)) {

userScore++;

}

});

setScore(userScore);

setShowSummary(true);

};

const handleRetakeExam = () => {

setSelectedAnswers(new Map());

setScore(0);

setShowSummary(false);

};

const questionItems = questions.map((question) => (

<div key={question.qid}>

<h4>{question.qid}) {question.question} ?</h4>

<ul>

{question.options.map((option) => (

<li key={option}>

<label>

<input

type="radio"

name={question.qid}

value={option}

checked={selectedAnswers.get(question.qid) === option}

onChange={(event) => handleAnswerSelection(event, question.qid, option)}

/>

{option}

</label>

</li>

))}

</ul>

</div>

));

const summaryItems = questions.map((question) => {

const selectedAnswer = selectedAnswers.get(question.qid);

const correctAnswer = answers.find((answer) => answer.qid === question.qid)?.correctAns;

const isCorrect = String(selectedAnswer) === String(correctAnswer);

return (

<div key={question.qid}>

<h4>{question.qid}) {question.question}</h4>

<p>Your Answer: {selectedAnswer}</p>

{isCorrect ? (

<p style={{ color: "green" }}>Correct!</p>

) : (

<>

<p style={{ color: "red" }}>Incorrect!</p>

<p>Correct Answer: {correctAnswer}</p>

</>

)}

<hr />

</div>

);

});

return (

<div>

<h2>Online Test</h2>

{!showSummary ? (

<>

{questionItems}

<button onClick={handleSubmit} style={{ fontSize: "18px", padding: "10px 20px" }}>

Submit

</button>

</>

) : (

<>

<h3>Review</h3>

{summaryItems}

<p>Score: {score}</p>

<button onClick={handleRetakeExam}>Retake Exam</button>

</>

)}

</div>

);

}

export default OnlineTest;

**App.js**

import logo from './logo.svg';

import './App.css';

import OnlineTest from './OnlineTest';

function App() {

return (

<div>

<OnlineTest></OnlineTest>

</div>

);

}

export default App;

**Questions.json**

{

"questions":[

{

"qid": 1,

"question": "12 + 8 is equal to",

"options": [17, 21, 34, 20]

},

{

"qid": 2,

"question": "What City is the capital of England ? ",

"options": ["Madrid", "London", "Washington", "Berlin"]

},

{

"qid": 3,

"question": "India is in what continent",

"options": ["America", "Europe", "Asia", "Africa"]

},

{

"qid": 4,

"question": "How many Planets does the solar system have? ",

"options": [4, 5, 7, 8]

},

{

"qid": 5,

"question": "Name of the coffee shop in the tv sitcom Friends!",

"options": ["Central Perk", "Costa", "Starbucks", "Cafe Nero"]

},

{

"qid": 6,

"question": "Which country finance the voyage that discovered America?",

"options": ["Portugal", "Italy", "Spain", "England"]

},

{

"qid": 7,

"question": "Where is the biggest Colosseum located?",

"options": ["Bath", "Venice", "Sardigne", "Rome"]

},

{

"qid": 8,

"question": "In what year did the Titanic sink ?",

"options": ["1912", "1910", "1908", "1914"]

},

{

"qid": 9,

"question": "When did the Second world War Start?",

"options": ["1944", "1939", "1938", "1942"]

},

{

"qid": 10,

"question": "Do Black Holes Exist? ",

"options": ["Yes", "Maybe yes", "No", "Maybe Not"]

}

],

"answers":[

{"qid":1,"correctAns":"20"},

{"qid":2,"correctAns":"London"},

{"qid":3,"correctAns":"Asia"},

{"qid":4,"correctAns":"8"},

{"qid":5,"correctAns":"Central Perk"},

{"qid":6,"correctAns":"Spain"},

{"qid":7,"correctAns":"Rome"},

{"qid":8,"correctAns":"1912"},

{"qid":9,"correctAns":"1939"},

{"qid":10,"correctAns":"Yes"}

]

}