19/12/22

```
1    //TASK 8 PART 3
2
3
4      const questions = [
5        {
6          question: "What colour is the sky?",   Property 1
7          options: ["Purple", "Pink", "Blue", "Yellow"],  Property 2
8          correct: "Blue"   Property 3
9        }
10     ];
11
12     let correctAnswers = 0; // variable to store the number of correct answers
13
14     questions.forEach(questionData => {
15       const { question, options, correct } = questionData;
16       let answer;
17       let isCorrect = false; // flag to track whether the answer is correct
18
19       do {
20         // Display the question and options to the user
21         console.log(question);
22         options.forEach((option, index) => {
23           console.log(`${String.fromCharCode(97 + index)}. ${option}`);
24         });
25
26         // Prompt the user to enter their answer
27         answer = prompt("Enter the letter of your answer:");
28
29         // Check if the answer is valid (a letter between 'a' and the number of options)
30         if (answer >= 'a' && answer <= String.fromCharCode(97 + options.length - 1)) {
31           // Check if the answer is correct
32           if (options[answer.charCodeAt(0) - 97] === correct) {
33             console.log("Correct!");
34             isCorrect = true;
35             correctAnswers++; // increment the number of correct answers
36           } else {
37             console.log("Incorrect. Please try again.");
38           }
39         } else {
40           console.log("Invalid answer. Please try again.");
41         }
42       } while (!isCorrect);
43     });
44
45     // Display the score
46     console.log(`You got ${correctAnswers} out of ${questions.length} questions correct.`);
```

Handwritten annotations:

ARRAY (bracketing lines 4-10)

There is only one question being asked so keeping a tally of the correct answers is pointless unless I add another question. (→ line 12)

Array.prototype.forEach() method to iterate over the questions array, specifically the question property and options property (→ line 14)

DO WHILE LOOP (lines 19-24)

Displays option property
options.forEach (option, index) => { Lists options

converts 0-indexing to a,b,c list in relation to the list

'a' 0-based indexing

String.fromCharCode converts a unicode value to a string. You could simply write 'a', 'b', 'c'... However it is good practice to use Unicode as it is a standardised way to encode and represent characters e.g. You cannot represent characters in Arabic or Chinese. So using Unicode makes it easier to work with text in a globalised world.

User enters c. 99 - 97 => 2 (c) (a) index 2

4 options = 100 = d in unicode code point

translated back to indexing for Javascript logic