

Project Instructions: Terminal-Based Quiz Application in PHP

Task Description:

You will write a PHP script for a **Quiz Application** that:

1. Asks a set of predefined questions to the user.
 2. Evaluates the user's answers.
 3. Provides a score and feedback based on their performance.
-

Requirements:

1. Define the following function:

- `evaluateQuiz(array $questions, array $answers): int`
 - Accepts two arrays as parameters:
 - `$questions`: An array of questions where each question has a `question` text and a `correct` answer.
 - `$answers`: An array of user-provided answers.
 - Compares the user's answers to the correct answers and calculates the score.
 - Returns the total score.

2. Create a set of quiz questions:

- Define an array of questions, each with a `question` and `correct` answer.
- Example:

```
$questions = [  
    ['question' => 'What is 2 + 2?', 'correct' => '4'],  
    ['question' => 'What is the capital of France?', 'correct' =>  
    'Paris'],  
    ['question' => 'Who wrote "Hamlet"?', 'correct' =>  
    'Shakespeare'],  
];
```

3. Collect answers from the user:

- Use a `foreach` loop to display each question and collect the user's answer using `readline()`.
- Store the user's answers in an array.

4. Evaluate the user's score:

- Pass the `$questions` and `$answers` arrays to the `evaluateQuiz` function.

- Display the score to the user in the format: "You scored X out of Y."

5. Provide feedback based on performance:

- If the user scores full marks, display: "Excellent job!"
- If the user scores more than half but less than full, display: "Good effort!"
- Otherwise, display: "Better luck next time!"

Example Output:

1. What is 2 + 2?

Your answer: 4

2. What is the capital of France?

Your answer: Paris

3. Who wrote "Hamlet"?

Your answer: Shakespeare

You scored 3 out of 3.

Excellent job!

```
<?php
```

```
// Function to evaluate the quiz
```

```
function evaluateQuiz(array $questions, array $answers): int {
```

```
    $score = 0;
```

```
    foreach ($questions as $index => $question) {
```

```
        if ($answers[$index] === $question['correct']) {
```

```
            $score++;
```

```
        }
```

```
    }
```

```
    return $score;
```

```
}
```

```
// Example questions
```

```
$questions = [
```

```
    ['question' => 'What is 2 + 2?', 'correct' => '4'],
```

```
    ['question' => 'What is the capital of France?', 'correct' => 'Paris'],
```

```
    ['question' => 'Who wrote "Hamlet"?', 'correct' => 'Shakespeare'],
```

```
];
```

```
// Collect answers from the user
```

```
$answers = [];
```

```
foreach ($questions as $index => $question) {
```

```
    echo ($index + 1) . ". " . $question['question'] . "\n";
```

```
    $answers[] = trim(readline("Your answer: "));
```

```
}
```

```
// Calculate score and provide feedback
$score = evaluateQuiz($questions, $answers);

echo "\nYou scored $score out of " . count($questions) . ".\n";

if ($score === count($questions)) {
    echo "Excellent job!\n";
} elseif ($score > 1) {
    echo "Good effort!\n";
} else {
    echo "Better luck next time!\n";
}
```

PHP Assignment: Contact Management Terminal-Based App

Task Description

You will create a PHP script for a **Contact Management Terminal-Based App**. This app will allow users to:

1. **Add new contacts** with details like name, email, and phone number.
 2. **View a list of all added contacts**.
 3. **Exit the program**.
-

Requirements

Define the Following Functions

1. `addContact(array &$contacts, string $name, string $email, string $phone): void`
 - Adds a new contact to the `$contacts` array.
 - Use **pass-by-reference (&)** for the `$contacts` array to ensure the main array is updated.
 2. `displayContacts(array $contacts): void`
 - Displays all the contacts in a user-friendly format.
 - If no contacts exist, display the message: `"No contacts available."`
-

Create a Terminal-Based Menu

1. Use a `while` **loop** to repeatedly display the menu options:
 - Add Contact
 - View Contacts
 - Exit
 2. Use **conditionals** (`if-else` or `switch`) to handle the user's choice:
 - For **invalid input**, display the message: `"Invalid choice. Please try again."`
-

Handle User Input

1. Use `readline()` to take inputs from the user for:
 - Menu selection
 - Contact details (name, email, phone)
 2. Ensure the inputs for name, email, and phone are passed to the `addContact` function.
-

Exit the App Gracefully

1. When the user chooses the "Exit" option:
 - Display a goodbye message: `"Exiting..."`
 - Terminate the script.
-

Example Output

Contact Management Menu:

Add Contact

View Contacts

Exit Choose an option: 1 Enter name: John Doe Enter email: john@example.com Enter phone number: 1234567890 John Doe added to contacts.

Contact Management Menu:

Add Contact

View Contacts

Exit Choose an option: 2 Name: John Doe, Email: john@example.com, Phone: 1234567890

Contact Management Menu:

Add Contact

View Contacts

Exit Choose an option: 3 Exiting...

```
<?php
```

```
// Contact Management Terminal-Based App
```

```
$contacts = [];
```

```
// Function to add a contact
```

```
function addContact(array &$contacts, string $name, string $email, string $phone): void {
```

```
    $contacts[] = ['name' => $name, 'email' => $email, 'phone' => $phone];
}

// Function to display all contacts
function displayContacts(array $contacts): void {
    if (empty($contacts)) {
        echo "No contacts available.\n";
    } else {
        foreach ($contacts as $contact) {
            echo "Name: {$contact['name']}, Email: {$contact['email']},
Phone: {$contact['phone']}\n";
        }
    }
}

// Terminal-based interface
while (true) {
    echo "\nContact Management Menu:\n";
    echo "1. Add Contact\n2. View Contacts\n3. Exit\n";
    $choice = (int)readline("Choose an option: ");

    if ($choice === 1) {
        $name = readline("Enter name: ");
        $email = readline("Enter email: ");
        $phone = readline("Enter phone number: ");
        addContact($contacts, $name, $email, $phone);
        echo "$name added to contacts.\n";
    } elseif ($choice === 2) {
        displayContacts($contacts);
    } elseif ($choice === 3) {
        echo "Exiting...\n";
        break;
    } else {
        echo "Invalid choice. Please try again.\n";
    }
}
}
```