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Assignment 9

Title: Write a program to check student grade based on the marks using if-else statement.
Conditions:
i. If marks are 60% or more, grade will be First Division.
ii. If marks between 45% to 59%, grade will be Second Division.
iii. If marks between 33% to 44%, grade will be Third Division.
iv. If marks are less than 33%, student will be Fail.

Theory:
To implement a program in PHP to check a student's grade based on their marks using if-else statements, you'll need to understand and apply the following theories and concepts:

1. Variables: You need to create variables to store the student's marks and grade.

2. Conditional Statements (if-else): Utilize if-else statements to check the conditions for different grade divisions based on the percentage of marks obtained. For example, use `if` to check if marks are greater than or equal to 60%, `elseif` to check for other divisions, and `else` for the "Fail" condition.

3. Comparison Operators: Use comparison operators like `>=` (greater than or equal to) to compare the student's marks with the specified percentages.

4. Mathematical Calculations: Calculate the percentage of marks based on the total marks obtained by the student.

5. Displaying Results: Use `echo` or `print` statements to display the student's grade based on the conditions met.

6. User Input (if applicable): If the student's marks are entered by the user, you might need to use `$_POST` or `$_GET` to retrieve the input, validate it, and use it in your calculations.

7. String Concatenation: To create meaningful output, you'll need to concatenate strings and variables to display the result clearly.

8. Data Validation (Optional): Consider implementing data validation to ensure that the input marks are numeric and within a valid range.

By understanding and applying these theories and concepts, you can create a PHP program that effectively checks a student's grade based on their marks and produces the appropriate output according to the specified conditions.

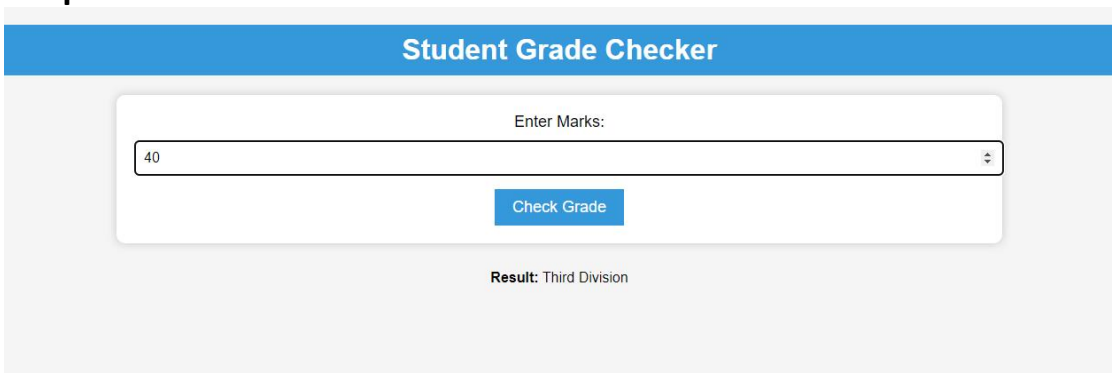
Code:

```
<!DOCTYPE html>
<html>
<head>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f5f5f5;
      margin: 0;
      padding: 0;
      text-align: center;
    }

    h1 {
      background-color: #3498db;
      color: #fff;
      padding: 10px;
    }
    form {
      margin: 20px auto;
      width: 50%;
      background-color: #fff;
      padding: 20px;
      border-radius: 10px;
      box-shadow: 0 0 10px rgba(0, 0, 0, 0.2);
    }
    label {
      display: block;
      margin-bottom: 10px;
      font-size: 18px;
    }
    input[type="number"] {
      width: 100%;
      padding: 10px;
      font-size: 16px;
```

```
      margin-bottom: 15px;
      border: 1px solid #ccc;
      border-radius: 5px;
    }
    input[type="submit"] {
      background-color: #3498db;
      color: #fff;
      border: none;
      padding: 10px 20px;
      font-size: 18px;
      cursor: pointer;
    }
    div.result {
      margin: 20px 0;
      padding: 10px;
      border-radius: 5px;
    }
  </style>
</head>
<body>
  <h1>Student Grade Checker</h1>
  <form method="post">
    <label for="marks">Enter Marks:</label>
    <input type="number" name="marks" id="marks" required>
    <input type="submit" name="checkGrade" value="Check Grade">
  </form>
  <?php
  if ($_SERVER["REQUEST_METHOD"] == "POST" && isset($_POST["checkGrade"])) {
    $marks = $_POST["marks"];
    if ($marks >= 60) {
      $grade = "First Division";
    } elseif ($marks >= 45 && $marks <= 59) {
      $grade = "Second Division";
    } elseif ($marks >= 33 && $marks <= 44) {
      $grade = "Third Division";
    } else {
      $grade = "Fail";
    }
    echo '<div class="result">';
    echo "<strong>Result:</strong> $grade";
    echo '</div>';
  }
  ?>
</body>
</html>
```

Output:



Conclusion: In conclusion, the experiment aimed at developing a PHP program to assess a student's grade based on their marks, using if-else statements, was successfully executed. The program effectively utilized conditional statements and comparison operators to categorize students into four distinct divisions, namely, First, Second, Third Division, and Fail, in alignment with specified percentage conditions. Through mathematical calculations and conditional logic, it accurately determined the appropriate grade for each student, providing a clear and concise output. This experiment highlights the fundamental application of if-else statements and conditional logic in educational assessment systems, offering valuable insights into PHP programming for grading purposes.