

Programming Exercise 01: (10 Points)

Scenario: You're tasked with developing the core functionality of an online bookstore named "Chapter & Verse." The goal is to fetch book information from a MySQL database, allow users to add books to a cart using cookies for persistence, and display the cart contents without user authentication or session management.

Instructions:

Answer the following questions to demonstrate your understanding of building this online bookstore.

Part 1:

MySQL (3 marks)

1. Design a table called a book to store following information of a book (points :2)
 - a. Title
 - b. Genre
 - c. authors
 - d. publisher
 - e. County
 - f. Publish date
 - g. Price
2. Now insert 5 books info into the database.(points :1)

Part 2: php

Implements the functionality using **PHP** and jQuery (7 marks)

1. DB connectivity (points :1)
2. Fetch & show books info (points : 2)
3. Use cookies to retain information (points: 2.5)

Programming Exercise 02: (5 Points)

```
<?php
```

```
function calculateTotalCost(float $price, int $quantity, float $discountRate):  
float  
{  
    // Calculate discount amount only if quantity is 2 or more  
    $discount = $quantity >= 2 ? $price * $discountRate : 0;  
  
    // Calculate total cost with discount applied  
    $totalCost = $price * $quantity - $discount;
```

```
    return $totalCost;
}

// Example usage
$cost = calculateTotalCost(10.0, 3.0, 0.1);
echo "Total cost: $" . number_format($cost, 2, '.', ''); // Format output for
currency

// This will print: Total cost: $30.00

?>
```

Instructions:

1. Analyze the code and identify the error. Explain the reason behind the error and its impact on the code's functionality. (points: 2)
2. Provide the corrected code with a brief explanation of the changes made as comment in the code. (points: 3)