**CIT4014: Chapter 02 Exercises – Response**

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**Exercise 2-1:**

**Image 1 – Ex. 2-1 step 5 - Source code of PHP POST Variable Capture**

**A screenshot of a computer

Description automatically generated**

**Image 2 – Ex. 2-1 step 7 – Result of PHP programming running in the web browser showing unformatted data.**

**Graphical user interface, text

Description automatically generated with medium confidence**

**Image 3 – Ex. 2-1 step 9 – Result of PHP programming running in the web browser showing bold and italic values (and error message).**

**Graphical user interface, text, application

Description automatically generated**

**Source code 1 – Ex. 2-1 step 11 – Complete source code of display\_discount.php (copy and paste the text – not an image of the text)**

<?php

    // Savier Osman

    // 10/25/2022

    // get Post data from form

    $product\_description = $\_POST["product\_description"];

    $list\_price = $\_POST["list\_price"];

    $discount\_percent = $\_POST["discount\_percent"];

    // Calculate discounts

    $discount = $list\_price \* $discount\_percent \* .01;

    $discount\_price = $list\_price - $discount;

    //Formatting data

    $list\_price\_f = "$".number\_format($list\_price, 2);

    $discount\_percent\_f = $discount\_percent."%";

    $discount\_f = "$".number\_format($discount, 2);

    $discount\_price\_f = "$".number\_format($discount\_price, 2);

?>

<!DOCTYPE html>

<html>

<head>

    <title>Product Discount Calculator</title>

    <link rel="stylesheet" type="text/css" href="main.css">

</head>

<body>

    <main>

        <h1>This page is under construction</h1>

        <label>Product Description:</label>

        <span><?php echo htmlspecialchars($product\_description); ?></span><br>

        <label>List Price:</label>

        <span><?php echo htmlspecialchars($list\_price\_f); ?></span><br>

        <label>Standard Discount:</label>

        <span><?php echo htmlspecialchars($discount\_percent\_f); ?></span><br>

        <label>Discount Amount:</label>

        <span><?php echo $discount\_f; ?></span><br>

        <label>Discount Price:</label>

        <span><?php echo $discount\_price\_f; ?></span><br>

    </main>

</body>

</html>

**Exercise 2-2:**

**Image 5 – Ex. 2-2 step 3 – Image showing an error of your choice testing the program.**

**Graphical user interface, application

Description automatically generated**

**Image 6 – Ex. 2-2 step 5 – Image showing the error if a value grater than 15 is entered for the Interest rate.**

**Graphical user interface, text, application

Description automatically generated**

**Image 7 – Ex. 2-2 step 6 – Image showing the program is working correction and displaying the date.**

**Graphical user interface

Description automatically generated with medium confidence**

**Source code 2 – Ex. 2-2 step 6 – Complete source code of display\_discount.php (copy and paste the text – not an image of the text)**

<?php

    //Savier Osman

    // Modified on 10/25/2022

    // get the data from the form

    $investment = filter\_input(INPUT\_POST, 'investment',

        FILTER\_VALIDATE\_FLOAT);

    $interest\_rate = filter\_input(INPUT\_POST, 'interest\_rate',

        FILTER\_VALIDATE\_FLOAT);

    $years = filter\_input(INPUT\_POST, 'years',

        FILTER\_VALIDATE\_INT);

    // validate investment

    if ($investment === FALSE ) {

        $error\_message = 'Investment must be a valid number.';

    } else if ( $investment <= 0 ) {

        $error\_message = 'Investment must be greater than zero.';

    // validate interest rate

    } else if ( $interest\_rate === FALSE )  {

        $error\_message = 'Interest rate must be a valid number.';

    } else if ( $interest\_rate <= 0 ) {

        $error\_message = 'Interest rate must be greater than zero.';

    } else if ( $interest\_rate > 15 ) {

        $error\_message = 'Interest rate must be less than or equal to 15.';

    // validate years

    } else if ( $years === FALSE ) {

        $error\_message = 'Years must be a valid whole number.';

    } else if ( $years <= 0 ) {

        $error\_message = 'Years must be greater than zero.';

    } else if ( $years > 30 ) {

        $error\_message = 'Years must be less than 31.';

    // set error message to empty string if no invalid entries

    } else {

        $error\_message = '';

    }

    // if an error message exists, go to the index page

    if ($error\_message != '') {

        include('index.php');

        exit(); }

    // calculate the future value

    $future\_value = $investment;

    for ($i = 1; $i <= $years; $i++) {

        $future\_value += $future\_value \* $interest\_rate \* .01;

    }

    // apply currency and percent formatting

    $investment\_f = '$'.number\_format($investment, 2);

    $yearly\_rate\_f = $interest\_rate.'%';

    $future\_value\_f = '$'.number\_format($future\_value, 2);

?>

<!DOCTYPE html>

<html>

<head>

    <title>Future Value Calculator</title>

    <link rel="stylesheet" type="text/css" href="main.css">

</head>

<body>

    <main>

        <h1>Future Value Calculator</h1>

        <label>Investment Amount:</label>

        <span><?php echo $investment\_f; ?></span><br>

        <label>Yearly Interest Rate:</label>

        <span><?php echo $yearly\_rate\_f; ?></span><br>

        <label>Number of Years:</label>

        <span><?php echo $years; ?></span><br>

        <label>Future Value:</label>

        <span><?php echo $future\_value\_f; ?></span><br>

        <?php // Display the date of the calculation ?>

        <p>This calculation was done on <?php echo date('m/d/y')?>.</p>

    </main>

</body>

</html>