INFO 151 (Web Systems and Services)

Coursework: PHP Reading and Practical Exercises

1. Read and understand the basics of PHP and server-side server systems. Read **ONLY** from the recommended course textbook (NOT any other books which may provide incorrect information)
2. For PHP the required reading is:
    a. Chapter 12: PHP Fundamentals (variables, strings, an arrays) – pages 299-325
    b. Chapter 13: PHP Fundamentals (functions, objects, and flow control) – pages 327-365
    c. Chapter 14: (Working with cookies and user sessions) – pages 367-383
    d. Chapter 15: (Working with web-based forms) – pages 385-423
3. Exercises (for HTML, JavaScript, and PHP):
    a. At the end of each chapter in the course textbook you will find (a) a Question and Answer (Q&A) section and (b) Workshop section with questions and exercises.
    b. For all the chapters we have covered in this course: work through the Q&A sections and the Workshop exercises and questions (this will be important for the final exam).
4. Read and understand the similarities and differences between JavaScript and PHP syntax
5. Read and understand the nature of PHP arrays and how they differ from JavaScript arrays
6. Create a new PHP project in the NetBeans IDE and complete the set practical programming example shown below

PHP Exercise

As we have seen PHP and JavaScript are very similar. However, there are differences in the syntax as introduced in the tutorials and in the course resources provided.
You will find full details of functions in PHP plus other features (such as scope etc) of the language in Chapter 13 of the recommended course textbook and the tutorial slides (do not use other books as they may not provide the correct information or code examples).

To practice the use of PHP and the differences in the syntax you are required to complete the following exercises:

Exercise #1

1. Create a PHP project (with a suitable memorable project name)
2. Create the HTML web pages (*index.php*) with the correct HTML <tags> and PHP script <tags>
1. Create 2 number variables and 1 string variable
3. Write a PHP program the adds the 2 number variables and outputs the result (use **`echo`** and **`print`**) in a concatenated string using variable substitution

Exercise #2

4. Create a PHP project (with a suitable memorable project name)
5. Create the HTML web pages (*index.php*) with the correct HTML <tags> and PHP script <tags>
6. Create the following PHP variables (*operands*):
    a. 5
    b. 9
    c. result
7. Add the two numbers and assign the result to the result variable
8. In JavaScript:
    a. Output the result to a web page.
9. In PHP:
    a. Using **`printf()`** output the result as:

    i. A binary number
    ii. A floating-point number with 3 decimal places
    iii. A string
    iv. A capitalised hexadecimal number
    v. An Octal number
10. Compare the resulting output (from JavaScript and PHP)
11. Revise the PHP script using s`printf()` with the same output

Exercise #3

1. Create a PHP project (with a suitable memorable project name)
2. Create the following PHP variables:
    a. 3
    b. 9
    c. 4
    d. Res
3. Using operator precedence add 9 and 4 and multiply the
4. Write a PHP script to produce the following output in a web browser:
    a. The value of variable 9 as an integer is (output the formatted output)
    b. The value of 9 as a floating-point number with 4 decimal place is (output the formatted output)
    c. The sum of 9 and 4 is 13 (output the result as a binary and floating-point number with 3 decimal places)
    d. Dividing 13 by 4 results in (output the result as a binary and floating-point number with 2 decimal places)