Lab 7 – Programming Arrays, Objects

# Purpose

* Programming using Arrays
* Programming using Objects
* Upload your website to a Web server

# Due Date

* This lab must be handed in:

**Sunday October 28, 2018 – before midnight**

# Assessment

* This Lab is worth 2% of your total course mark.

# Assigned Readings

The following chapters of ‘**Fundamentals of Web Development**’ will be useful in completing this Lab:

* Chapter 9
* Chapter 10

# Lab Supplies

To complete this lab you will require the following lab supplies:

* Textbook: **Fundamentals of Web Development**
* EasyPHP, or other WAMP server
* Eclipse, Notepad (or other text editor, or IDE)
* FileZilla (or other FTP client)

# Summary of Tasks

1. Develop the logic to display your web application
2. Upload your website to a webserver
3. View your webpage using a web browser
4. Submit Lab Link on Brightspace
5. Submit source code of all PHP files on Brightspace.

# Task 1

Before getting started with the following tasks, review the ‘Common Look and Feel’ video provided on Brightspace (under: Course Content 🡪 Extra Materials). Using the knowledge gained in these materials, implement the following Design Pattern to create a ‘Common Look and Feel’ to be used on every page of your website.

|  |
| --- |
|  |

Your web site will include the following PHP scripts:

* Header.php
* Footer.php
* Menu.php
* Array1.php
* Array2.php
* Object.php

**Header.php**

Header.php must contain a script to display a Common Header that will appear on every page. The header must contain a banner (images, css, etc).

**Footer.php**

Footer.php must contain a script to display a Common Footer that will appear on every page. The footer must contain Student Number, First Name, Last Name, and Email Address

**Menu.php**

Menu.php must contain a script to display a Common Menu to be shown on every page. The menu must contain links to Array1.php, Array2.php and Object.php

**Array1.php**

Create a PHP script that will perform the following tasks.

1. Create an ***associative array*** called ***‘$calendar’***
2. Fill the array with the months of a year, starting with January and going in order to December
3. Use the ***print\_r()*** function to display the contents of the array
4. Place a header (h1) on the page with the following words ‘FOR loop’
5. Use a ***for*** loop to display the contents of the array

Month 1: January

Month 2: February

…

Month 12: December

1. Place a header (h1) on the page with the following words ‘FOREACH loop’
2. Use a ***foreach*** loop to display the contents of the array

Month 1: January

Month 2: February

…

Month 12: December

1. Place a header (h1) on the page with the following words ‘WHILE loop, SWITCH statement’
2. Use a while loop and a switch to display the following information:

Month 1: January has 31 days

Month 2: February has 28, or 29 days

…

Month 12: December has 31 days

12. Include common Header, Menu and Footer to the page.

**Array2.php**

Create a PHP script that will perform the following tasks.

1. Create a multidimensional associative array called **‘$Product**’ which will contain the elements of the following table:

|  |
| --- |
|  |

1. Display the structure of the **‘$Product**’ array using the following command: var\_dump($Product);
2. Display the elements of the **‘$Product**’ array using the conditional loop (e.g., foreach) of PHP. The expected output is as below:

|  |
| --- |
|  |

1. Create a HTML table with the title (i.e., **Category**, **Brand**, **Quantity**, **Price**) for each column and populate the table using the elements of **‘$Product**’ array. The expected output is as below:

|  |
| --- |
|  |

**N.B.: You must populate the table using the conditional loop (e.g., foreach) of PHP.**

1. Include common Header, Menu and Footer to the page.

**Object.php**

Create a PHP script that will perform the following tasks.

1. Define an interface ***Employee*** with a method ***displayEmployeeInfo()***.
2. Define a class ***Management*** which implements ***Employee*** interface and contains protected properties: ***sin, age, salary.*** Create a ***constructor*** method that takes in ***sin, age, and salary.*** Implement the method ***displayEmployeeInfo()*** to display the properties of each object instance.
3. Define a derived class ***Manager*** that inherits from the ***Management*** class and contains a private property: ***adminLevel***. You may need to override the ***constructor*** and ***displayEmployeeInfo()*** method for this derived class.
4. Define a class ***Development*** which implements ***Employee*** interface and contains protected properties: ***sin, age, salary.*** Create a ***constructor*** method that takes in ***sin, age, and salary.*** Implement the method ***displayEmployeeInfo()*** to display the properties of each object instance.
5. Define a derived class ***ITSpecialist*** that inherits from the ***Development*** class and contains a private property: ***projectAssigned***. You may need to override the ***constructor*** and ***displayEmployeeInfo()*** method for this derived class.
6. Instantiate (Create) at least two objects of ***Manager*** and display the properties of each object instance. Sample output is as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | |

1. Instantiate (Create) at least two objects of ***ITSpecialist*** and display the properties of each object instance. Sample output is as follows:

|  |
| --- |
|  |

1. Include common Header, Menu and Footer to the page.

# Task 2

Upload your website to a Web server. Use an FTP client to connect to your Web server.

Once you connect to the webserver using an FTP client, create a directory called ‘/CST8238/Lab7’. Once your course directory has been created navigate to that new directory. Add your all php files to this location. (Using FileZilla simply drag all PHP files into your folder).

# Task 3

View your website using a web browser. Open a web browser and navigate to the following web address:

**http://web-server\_domain\_name/CST8238/Lab7/<filename>**

For example, the web address to my page is:   
http://profrejaul.com/CST8238/Lab7/Array1.php

Where ‘profrejaul.com’ is the domain name of the Web server, ‘ /CST8238/Lab7’ is the name of the directory I created in the Web server using FTP client and ‘Array1.php’ is the homepage I created for this lab.

# Task 4

Once you have confirmed that your webpage is available online, you are ready to hand in your lab.

Create a compressed file (**Lab7.zip**) which will contain the following PHP files:

* Header.php
* Footer.php
* Menu.php
* Array1.php
* Array2.php
* Object.php

Create a word document (**Lab7.doc**) in which write the following Information:

* Student Number
* First Name
* Last Name
* The URL, or hyperlink of the home page (Array1.php) of Lab 7

To hand in your lab, go to Brightspace and navigate to *Course Content 🡪 Labs* and click on

‘Lab 7 – Programming Arrays, Objects’ link.

Upload the word document (**Lab7.doc**) and the compressed file **(Lab7.zip**) on Brightspace.

Finally, click the ‘Submit’ button to send the lab to your professor.

N.B. Please keep in mind that ONLY .**zip** file is accepted as the format of the compressed file.

**IMPORTANT NOTE**:

If the URL, or hyperlink, does not direct the professor to the lab you will receive a ZERO for the lab assignment.

**IMPORTANT NOTE:**

You may only submit a Lab ONE TIME. Be sure the lab is complete before clicking on the ‘Submit’ button.