ICT726 Web Development

Tutorial 6
PHP - Hypertext Preprocessor

Overview

This week's lab exercises:

- Setting up a local server for PHP
- Writing PHP codes
- Using POST and GET to process FORM data

References

- https://blog.templatetoaster.com/install-xampp-on-windows/
- https://www.wikihow.com/Install-XAMPP-for-Windows
- https://netbeans.org/kb/docs/php/configure-php-environment-windows.html

Guidelines

Start by putting everything into a folder named "ict726_tutorial6".

Note: Since absolute links will only work on your computer, we recommend checking your website to make sure all the links work and use the same structure on your home computer.

Introduction

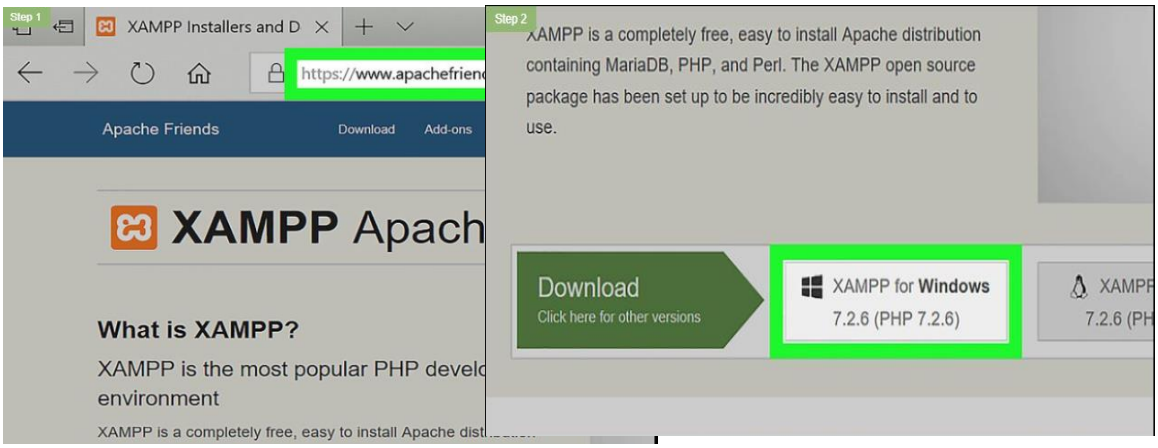
PHP is a one of the most popular server-side programming language on the web. Most of the web hosts have PHP already installed. It is easy to learn and have many libraries that can significantly reduce the development time. Many popular websites like Facebook and Yahoo are successfully using it. The PHP files have ".php" extension and we cannot run them in the browser directly, as we did with HTML, CSS and JavaScript. In this tutorial we will be configuring the PHP development environment on Windows operating system. There are two ways to configure your PHP development environment.

1. To install and configure **A**pache, **M**ySQL and **P**HP package
2. To install and configure each component separately.

In this tutorial we will be using the first method and install **XAMPP** package. XAMPP stands for X- cross-platform, A- Apache, M- MySQL, P- PHP, P- Perl. It is a completely free and open source solution that gives you an incredible local web server to work on. Installing XAMPP sets you free from learning and remembering commands to run

Apache, MySQL, etc. It simply gives you a control panel to manage all the inclusive components. To install XAMPP you need to perform the following steps.

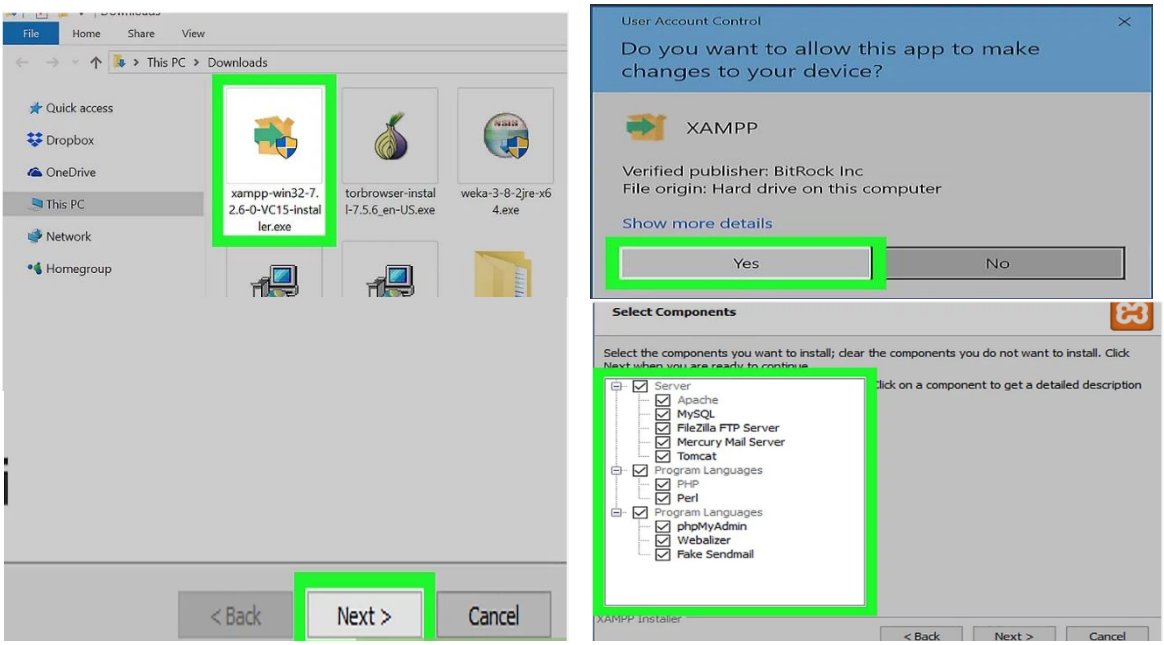
1. Open the XAMPP website. Go to https://www.apachefriends.org/index.html in your computer's web browser.
2. Click **XAMPP for Windows**. It's a grey button near the bottom of the page. Depending on your browser, you may first have to select a save location or verify the download.



3. Double-click the downloaded file. This file should be named something like xampp-win32-7.2.4-0-VC15-installer, and you'll find it in the default downloads location (e.g., the "Downloads" folder or the desktop).

4. Click Yes when prompted. This will open the XAMPP setup window. You may have to click OK on a warning if you have User Account Control (UAC) activated on your computer.

5. Click Next. It's at the bottom of the setup window.



6. Select aspects of XAMPP to install. Review the list of XAMPP attributes on the left side of the window; if you see an attribute that you don't want to install as part of XAMPP, uncheck its box. By default, all attributes are included in your XAMPP installation.
7. Click Next. It's at the bottom of the window.
8. Select an installation location. Click the folder-shaped icon to the right of the current installation destination, then click a folder on your computer.
9. Click Next. You'll find it at the bottom of the page.
10. Uncheck the "Learn more about Bitnami" box, then click Next. The "Learn more about Bitnami" box is in the middle of the page.
11. Begin installing XAMPP. Click Next at the bottom of the window to do so. XAMPP will begin installing its files into the folder that you selected.
12. Click Finish when prompted. It's at the bottom of the XAMPP window. Doing so will close the window and open the XAMPP Control Panel, which is where you'll access your servers.
13. Select a language. Check the box next to the American flag for English, or check the box next to the German flag for German.
14. Click Save. Doing so opens the main Control Panel page.
15. **Start XAMPP from its installation point**. If you need to open the XAMPP Control Panel in the future, you can do so by opening the folder in which you installed XAMPP, right-clicking the orange-and-white xampp-control icon, clicking Run as administrator, and clicking Yes when prompted.
    a. When you do this, you'll see red X marks to the left of each server type (e.g., "Apache"). Clicking one of these will prompt you to click Yes if you want to install the server type's software on your computer.
    b. Counterintuitively, double-clicking the xampp_start icon doesn't start XAMPP.
16. **Resolve issues with Apache refusing to run**. On some Windows 10 computers, Apache won't run due to a "blocked port". This can happen for a couple of reasons, but there's a relatively easy fix:
    a. Click Config to the right of the "Apache" heading.
    b. Click Apache (httpd.conf) in the menu.
    c. Scroll down to the "Listen 80" section (you can press Ctrl+F and type in listen 80 to find it faster).
    d. Replace 80 with any open port (e.g., 81 or 9080).
    e. Press Ctrl+S to save the changes, then exit the text editor.
    f. Restart XAMPP by clicking Quit and then re-opening it in administrator mode from its folder.

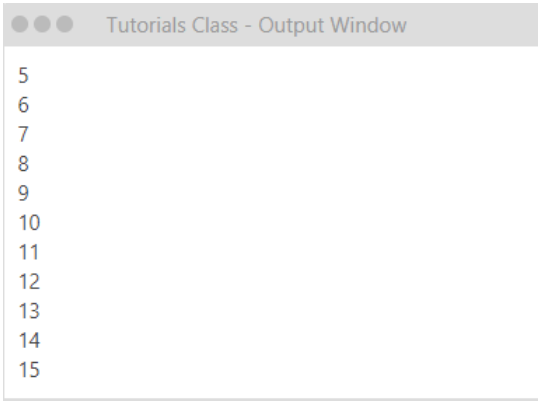
Exercise 1:

Write a Program to display count, from 5 to 15 using PHP loop as given below.

Instructions:

- You can use “for” or “while” loop
- You can use variable to initialize count
- You can use html tag for line break

Output:



Exercise 2:

Write a PHP program to calculate electricity bill using if-else conditions.

Conditions:

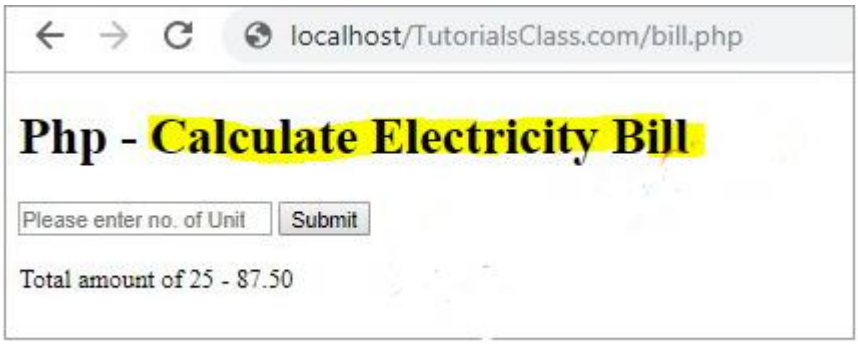
- For first 50 units – AUD. 3.50/unit
- For next 100 units – AUD. 4.00/unit
- For next 100 units – AUD. 5.20/unit
- For units above 250 – AUD. 6.50/unit

You can use conditional statements. You can use the following code to create the form

```
<body>
<div id="page-wrap">
  <h1>Php - Calculate Electricity Bill</h1>
  <form action="" method="post" id="quiz-form">
      <input type="number" name="units" id="units" placeholder="Please
enter Units" />
      <input type="submit" name="unit-submit" id="unit-submit"
value="Submit" />
  </form>
</div>
```

```
</body>
```

Output:



Exercise 3:

Write a simple calculator program in PHP using switch case. Your program need to perform the basic addition, subtraction, multiplication and division.

Your program must have two text boxes to get input numbers from user. You can also add 4 buttons to perform basic arithmetic operations. Once the user enter the number and press the button show the calculated results at the end.

Practice:

In this exercise you will include multiple php files to create your page. At the end your page look like the following website

Step 1: Create a new project directory **Blog Project** in **htdocs** or **www** folder on your computer. Create the following subfolders inside your main directory.

- Css: This folder will contain all the css files.
- Js: This folder will contain the JavaScript files related to the project.
- Resources: This folder contains the images, videos, audios and other resources. You can create subfolders for each type of resources inside the directory.
- Include: This folder will contain the files that needs to be included in many pages.

Step 2: Create a file name index.php in the main Blog Project directory. Copy the following code in the index.php. Notice the php code in the footer section and write down the output for this code.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <link
href="https://fonts.googleapis.com/css?family=Averia+Serif+Libre|Noto+Se
rif|Tangerine" rel="stylesheet">
    <link rel="stylesheet" href="css/public_style.css">
    <title>MyFood Blog | Home</title>
</head>
<body>
    <!-- container - wraps whole page -->
    <div class="container">
        <!-- navbar -->
        <div class="navbar">
            <div class="logo_div">
                <a href="index.php"><h1>MyFood Blog</h1></a>
            </div>
            <ul>
                <li><a href="index.php" class="active">Home</a></li>
                <li><a href="#news">News</a></li>
                <li><a href="#contact">Contact</a></li>
                <li><a href="#about">About</a></li>
            </ul>
        </div>
        <!-- navbar -->

        <!-- Page content -->
        <div class="content">
            <h2 class="conetnt-title">Recent Articles</h2>
            <hr>
            <!-- more content still to come here ... -->
        </div>
        <!-- Page content -->
```

```
        <!-- Footer -->
    <div class="footer">
            <p>MyFood Blog &copy; <?php echo date('Y')?> </p>
        </div>
        <!-- Footer -->

    </div>
    <!-- container - wraps whole page -->

</body>
</html>
```

Step 3: To view the file in the browser, go to *http://localhost/BlogProject/index.php* or the path you used to store your file. (Make sure that your Apache and MySQL server are running).

You may have noticed that our blog doesn't look very nice, in the next step lets add some **CSS** styles.

Step 4: To add the style, crate a **style.css** file in the css folder. Copy the following code in your style file

```
/****************
*** DEFAULTS
*****************/
* { margin: 0px; padding: 0px; }

html { height: 100%; box-sizing: border-box; }
body {
  position: relative;
  margin: 0;
  padding-bottom: 6rem;
  min-height: 100%;
}
/* HEADINGS DEFAULT */
h1, h2, h3, h4, h5, h6 { color: #444; font-family: 'Averia Serif
Libre', cursive; }
a { text-decoration: none; }
ul, ol { margin-left: 40px; }
hr { margin: 10px 0px; opacity: .25; }
```

```
/* FORM DEFAULTS */
form h2 {
    margin: 25px auto;
    text-align: center;
    font-family: 'Averia Serif Libre', cursive;
}
form input {
    width: 100%;
    display: block;
    padding: 13px 13px;
    font-size: 1em;
    margin: 5px auto 10px;
    border-radius: 3px;
    box-sizing : border-box;
    background: transparent;
    border: 1px solid #3E606F;
}
form input:focus {
    outline: none;
}
/* BUTTON DEFAULT */
.btn {
    color: white;
    background: #4E6166;
    text-align: center;
    border: none;
    border-radius: 5px;
    display: block;
    letter-spacing: .1em;
    margin: 10px 0px;
    padding: 13px 20px;
    text-decoration: none;
}
.container {
    width: 80%;
    margin: 0px auto;
}
/* NAVBAR */
.navbar {
    margin: 0 auto;
```

```
    overflow: hidden;
    background-color: #3E606F;
    border-radius: 0px 0px 6px 6px;
}
.navbar ul {
    list-style-type: none;
    float: right;
}
.navbar ul li {
    float: left;
    font-family: 'Noto Serif', serif;
}
.navbar ul li a {
    display: block;
    color: white;
    text-align: center;
    padding: 20px 28px;
    text-decoration: none;
}
.navbar ul li a:hover {
    color: #B9E6F2;
    background-color: #334F5C;
}

/* LOGO */
.navbar .logo_div {
    float: left;
    padding-top: 5px;
    padding-left: 40px;
}
.navbar .logo_div h1 {
    color: #B9E6F2;
    font-size: 3em;
    letter-spacing: 5px;
    font-weight: 100;
    font-family: 'Tangerine', cursive;
}

/* FOOTER */
.footer {
  position: absolute;
```

```
  right: 0;
  bottom: 0;
  left: 0;
  color: white;
  background-color: #73707D;
  text-align: center;
  width: 80%;
  margin: 20px auto 0px;
  padding: 20px 0px;
}
```

Step 5: Now view the file in your browser and it would look much better. You can scroll down to see the footer.

Step 6: There are few code sections that will need to be added in many pages of the website. For example, navigation or footer. Create a footer.php and move the footer div code to this file.

Step 7: Now add the following line instead of your footer div in index.php.

```
<!-- Footer -->
        <?php include('includes/footer.php') ?>
```

Step 8: Repeat Step 6 for the navigation bar code and replace the navbar code with the following line in the index.php

```
<!-- navbar -->
       <?php include('includes/nvabar.php') ?>
```

Step 9: Create a new banner.php in include folder with the following code

```
<div class="banner">
    <div class="welcome_msg">
        <h1>Today's Inspiration</h1>
        <p>A recipe has no SOUL <br>
           YOU, as the cook must bring <br>
           the SOUL to the recipe. <br>
           <span>~ Thomas Keller</span></p>
        <a href="register.php">Join us!</a>
    </div>
    <div class="login_div">
        <form action="index.php" method="post">
```

```
            <h2>Login</h2>
            <input type="text" name="username"
placeholder="Username">
            <input type="password" name="password"
placeholder="Password">
            <button class="btn" type="submit"
name=""login_btn">Sign in</button>
        </form>
    </div>
</div>
```

Step 10: Include the file in the index.php by using the php include function.

```
       <!-- banner -->
    <?php include('includes/banner.php') ?>
```

Step 11: Now let's style this banner by adding the following code in the style.css. Download an interesting background image for the banner and save it in resources as banner.jpg.

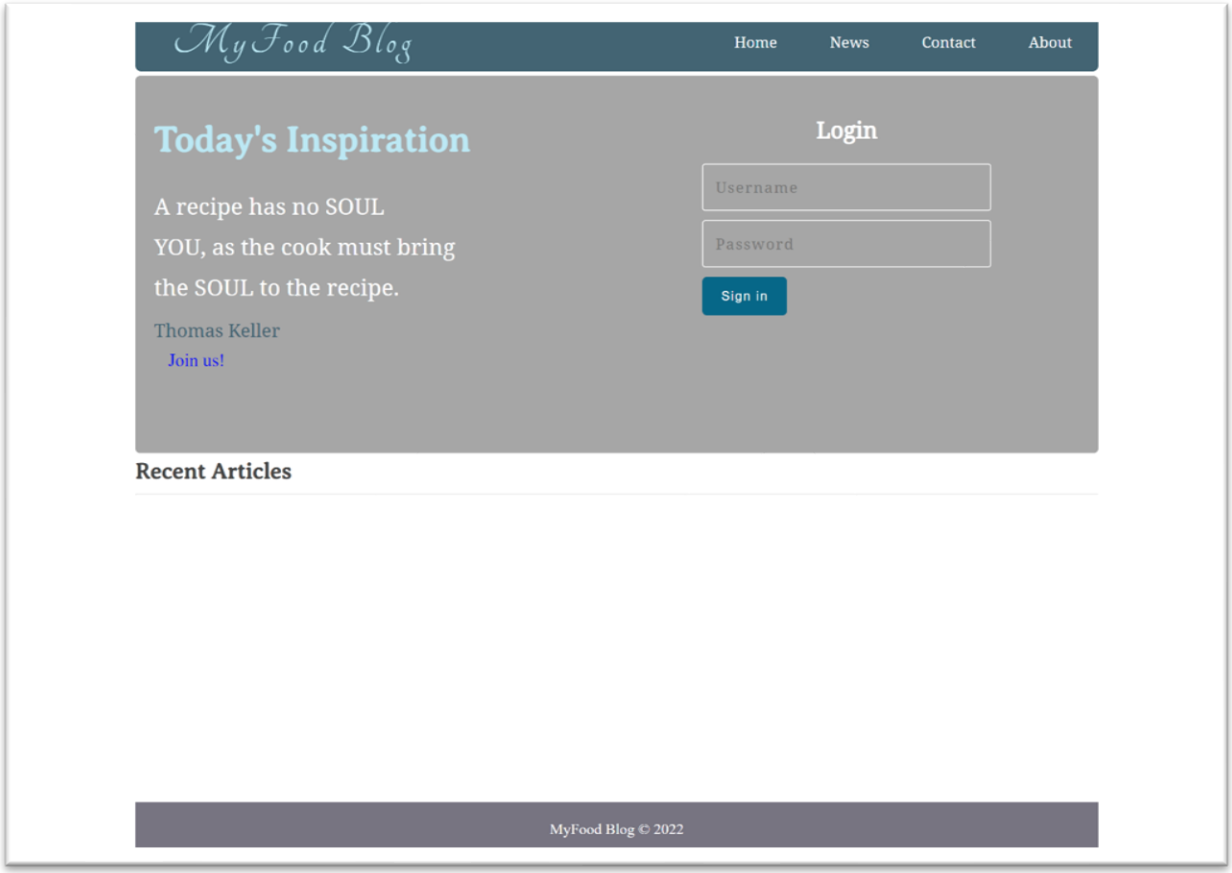
```
/* BANNER: Welcome message; */
.banner {
    margin: 5px auto;
    min-height: 400px;
    color: white;
    border-radius: 5px;
    background-image: url('../resources/images/bannner.jpg');
    background-size: 100% 100%;
}
.banner .welcome_msg {
    width: 45%;
    float: left;
    padding: 20px;
}
.banner .welcome_msg h1 {
    color: #B9E6F2;
    margin: 25px 0px;
    font-size: 2.4em;
    font-family: 'Averia Serif Libre', cursive;
}
```

```
.banner .welcome_msg p {
    color: white;
    font-size: 1.5em;
    line-height: 1.8em;
    font-family: 'Noto Serif', serif;
}
.banner .welcome_msg p span {
    font-size: .81em;
    color: #3E606F;
}
.banner .welcome_msg a {
    width: 30%;
    margin: 20px 0px;
    padding: 12px 15px;
    font-size: 1.2em;
    text-decoration: none;
}
.banner .welcome_msg a:hover {
    background: #374447;
}

/* BANNER: Login Form; */
.banner .login_div {
    width: 50%;
    float: left;
}
.banner .login_div form {
    margin-top: 40px;
}
.banner .login_div form h2 {
    color: white;
    margin-bottom: 20px;
    font-family: 'Noto Serif', serif;
}
.banner .login_div form input {
    width: 60%;
    color: white;
    border: 1px solid white;
    margin: 10px auto;
    letter-spacing: 1.3px;
    font-family: 'Noto Serif', serif;
```

```
}
.banner .login_div form button {
    display: block;
    background: #006384;
    margin-left: 20%;
}
```

Step 12: You website may look like the following figure with the a banner image you have used.



In this practice we learn that how different php files are created and used to make a website layout.

~~~~~~~~~~The END~~~~~~~~~~
~~~~~~~~~~