Lab 10 – PHP, AJAX, and XML

Purpose

- Explore XML using PHP and AJAX
- Upload your website to a Web server

Due Date

- This lab must be handed in:
  Friday Aug 02, 2024 – before midnight

Assessment

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

Assigned Readings

- ➢ **Lecture Slides** posted on Brightspace
  - Module 5-Advanced Web Applications
- ➢ The following chapters of **Fundamentals of Web Development** will be useful in completing this exercise:
  - Chapter 15, 17

Lab Supplies

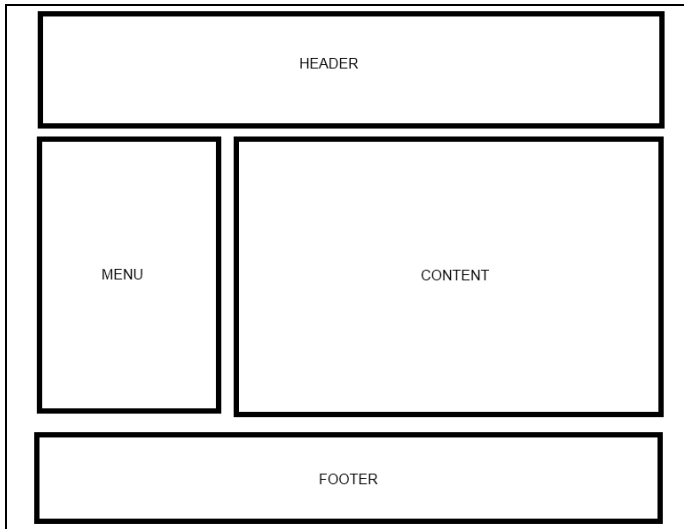To complete this lab you will require the following lab supplies:
- Lecture Slides (**Module 5**) and Code Examples (**XMLCodeExample.zip** and **PHP-Ajax-XML-Example.zip**) posted on Brightspace
- Textbook: **Fundamentals of Web Development** by Randy Connolly and Ricardo Hoar
- EasyPHP, or other WAMP server
- Eclipse, Notepad (or other text editor, or IDE)

Summary of Tasks

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

```
┌─────────────────────────────────────────────┐
│  ┌───────────────────────────────────────┐  │
│  │               HEADER                  │  │
│  └───────────────────────────────────────┘  │
│  ┌───────┐  ┌────────────────────────────┐  │
│  │       │  │                            │  │
│  │       │  │                            │  │
│  │ MENU  │  │          CONTENT           │  │
│  │       │  │                            │  │
│  │       │  │                            │  │
│  └───────┘  └────────────────────────────┘  │
│  ┌───────────────────────────────────────┐  │
│  │               FOOTER                  │  │
│  └───────────────────────────────────────┘  │
└─────────────────────────────────────────────┘
```

Your web site will include the following PHP scripts:
- Header.php
- Footer.php
- Menu.php
- Lab10.php
- Books.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 a link to *Lab10.php*.
NO link is required for *Books.php* as it can ONLY be accessed through *Lab10.php*.

Lab10.php
Create a web page that can fetch information from an XML file using PHP and AJAX. You need to display the selected content from the **Books.xml** file (provided on Brightspace).

Design the following form that will accept input from the user.

The form should provide a number of options to select books of specific category as below:

When a user selects a book category from the dropdown list, all Books' information related to the selected category should be displayed as below.

Expected output 1:

Expected output 2:

Select Book Category: [Fantasy ▾]

author: Ralls, Kim
title: Midnight Rain
genre: Fantasy
price: 5.95
publish_date: 2000-12-16
description: A former architect battles corporate zombies, an evil sorceress, and her own childhood to become queen of the world.

author: Corets, Eva
title: Maeve Ascendant
genre: Fantasy
price: 5.95
publish_date: 2000-11-17
description: After the collapse of a nanotechnology society in England, the young survivors lay the foundation for a new society.

author: Corets, Eva
title: Oberon's Legacy
genre: Fantasy
price: 5.95
publish_date: 2001-03-10
description: In post-apocalypse England, the mysterious agent known only as Oberon helps to create a new life for the inhabitants of London. Sequel to Maeve Ascendant.

author: Corets, Eva
title: The Sundered Grail
genre: Fantasy
price: 5.95
publish_date: 2001-09-10
description: The two daughters of Maeve, half-sisters, battle one another for control of England. Sequel to Oberon's Legacy.

• Lab10

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040 842 225

Expected output 3:

Select Book Category: [Romance ▾]

author: Randall, Cynthia
title: Lover Birds
genre: Romance
price: 4.95
publish_date: 2000-09-02
description: When Carla meets Paul at an ornithology conference, tempers fly as feathers get ruffled.

author: Thurman, Paula
title: Splish Splash
genre: Romance
price: 4.95
publish_date: 2000-11-02
description: A deep sea diver finds true love twenty thousand leagues beneath the sea.

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Expected output 4:

Computer Engineering Technology-CST8238(Web Programming)

Select Book Category: [Horror ▾]

author: Knorr, Stefan
title: Creepy Crawlies
genre: Horror
price: 4.95
publish_date: 2000-12-06
description: An anthology of horror stories about roaches, centipedes, scorpions and other insects.

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Expected output 5:

Computer Engineering Technology-CST8238(Web Programming)

Select Book Category: [Science Fiction ▾]

author: Kress, Peter
title: Paradox Lost
genre: Science Fiction
price: 6.95
publish_date: 2000-11-02
description: After an inadvertant trip through a Heisenberg Uncertainty Device, James Salway discovers the problems of being quantum.

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Books.php

Lab10.php file will invoke another PHP file named *Books.php* to download the contents of the XML file and produce the sample output as above.   The PHP script loads an XML document "*Books.xml*", runs a query against the XML file, and returns the result.

Task 2

Create Lab 10 submission folder '**Lab10**' and copy **Books.xml, Lab10.php, Books.php, Header.php, Footer.php, Menu.php** and any other required files (e**.g. css file**) into this folder**.**

Task 3

Upload your websites for Lab 10 into a Web Hosting Server by uploading '**Lab10**' folder inside the 'public_html' directory of 'SiteGround' Web Hosting domain using DashBoard.

The 'File Upload' instruction is posted on Brightspace (**Course Contents -> Module 1 -> Part 2 -> SiteGround_FileUpload_Instruction.docx**).

Task 4

View your websites for Lab 10 using a web browser. Open a web browser and navigate to the following web address:
http://your_web-hosting_domain_name/Lab10/<filename>

For example, the sample URL for Lab 10 on an arbitrary web hosting domain is:
rejaulc.sgedu.site/Lab10/Lab10.php

where '*rejaulc.sgedu.site*' is the name of an arbitrary web hosting domain, '*Lab10*' is the submission folder for Lab 10, '*Lab10.php*' is the homepage of Lab 10.

Task 5

Once you have confirmed that your webpage is available online, you are ready to hand in your lab.
Create a compressed file (**Lab10.zip**) which will contain the following PHP files:
- Header.php, Footer.php, Menu.php, Lab10.php, Books.php

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

Create a word document (**Lab10.doc**) in which write the following Information:
- Student Number, First Name, Last Name
- The URL, or hyperlink of the home page (Lab10.php) of Lab 10

To hand in your lab go to Brightspace and navigate to Content → Labs and click on 'Lab 10 – PHP, XML, AJAX' link.

Upload the word document (**Lab10.doc**) and the compressed file (**Lab10.zip**) on Brightspace. Finally, click the 'Submit' button to send the lab to your professor.

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

➢ If you do not upload either Lab10.zip or Lab10.doc on Brightspace, you will receive a ZERO for the lab assignment.