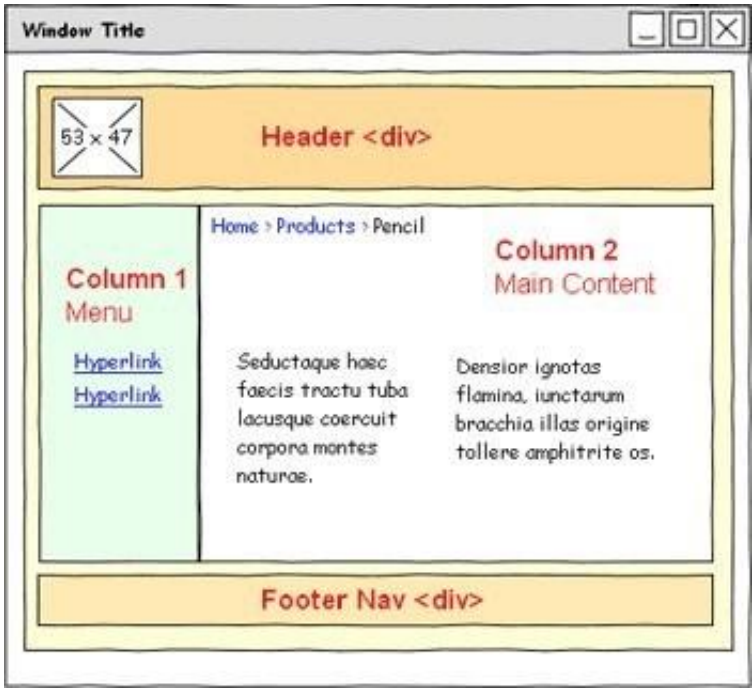
Lab 3: XHTML Page Layout - Tables, Divisions and Navigations



Note:
It is recommended that students go over this lab handout and come prepared before attending the lab class.
This will help students complete the lab activities within the allocated time, and without much difficulty. Complete any Pre-lab activities before starting with this lab activity.

Please also carry a USB Flash disk with you to the lab class. It is recommended that you save off all your work onto your flash disk.

In this lab

This lab activity will focus on the XHTML elements that affect the web page layout. The exercise for this week will require you to create a web page for a document that exists in a different format.

You will gain practice:

- Creating web page layout using `<table>`s and `<div>`s
- Displaying data in tabular form in XHTML
- Using tables for web page layout
- Creating a simple navigation menu

Background

The following links contain useful information that will help student's with this week's lab activities:

- w3schools.com (http://www.w3schools.com/)
- XHTML 1.0 Tag Reference (http://www.w3schools.com/tags/default.asp) W3C
- Markup Validation Service (http://validator.w3.org)

Within this lab, we will attempt to build tables and sections in XHTML. The basic structure of the table in (X)HTML is divided into rows, with each row consisting of data cells. In addition to traditionally presenting data in rows and columns, the grid system in tables plays a worthy role in managing the layout of web based documents.

Lab Objectives

- To use tables to define web page layout
- To display data in a tabular form in XHTML
- To create sections using divisions
- To create simple graphical menus using hyperlinks

Lab Requirements

Text Editor: Notepad++ (Recommended) or Notepad

: We need a Text editor like Notepad++ to write our HTML code

Web Browser: Mozilla Firefox or Internet Explorer or Google Chrome, etc

: A Web browser is needed to view the resulting output of the web page created

USB Flash disk/cloud storage

: Please save off all your work onto your external storage device

Notebook or Writing pad

: Keep a writing pad handy so that you can note down any important points covered during the lab class

XHTML 1.0 Transitional Document Structure

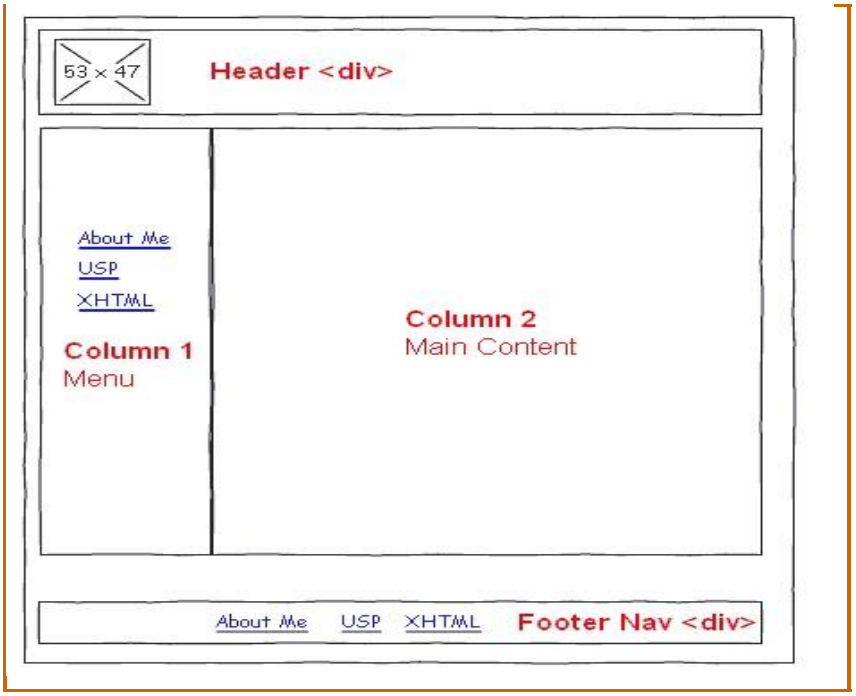
```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en-US">
<head>
      <title>Title goes here...</title>
   </head>

   <body>
      Content goes here...
   </body>
</html>
```

XHTML Syntax Rules

- `<!DOCTYPE>` is Mandatory
- XHTML elements (tags) must be in lowercase
- Attribute names must be in lower case
- Attribute values must be quoted
- All XHTML elements must be closed
- XHTML elements must be properly nested
- The id attribute replaces the name attribute
- XHTML documents must be well-formed
- Attribute minimization is forbidden

Activity: Creating the IS221 web page

In this activity you will attempt to create a web page to show the information contained in the IS221.docx file. Your web page will have the following layout:



1. Create a copy of the Lab2 folder and rename it to Lab3.
2. Save and extract the lab3files.zip file onto the Desktop
3. Copy all the files from the extracted folder and save them into the images folder in Lab 3.
4. Open a new file in Notepad++ and save it as IS221.html.
5. You will create a XHTML 1.0 Transitional page.
   Begin with the basic XHTML document structure. The XHTML 1.0 Transitional DOCTYPE is given below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

6. Put IS221 – Web Applications Development as page title.
7. Now create the header section for the IS221 web page using the `<div>` tag.


Add the `<div>` tag just after the opening `<body>` tag.

8. Put an `<img>` tag to display the usp_logo.jpg image inside the division created.
9. After the USP logo, add IS221 – Web Applications Development as heading 2.
10. Save and view your work in a web browser.
11. Next, add a table to the page with the following specifications:
    - *Rows: 1, Columns: 2*
    - *border = 1*
    - *width = 90%*

    Tables take the following structure in XHTML:

```
<table>
    <tr>
        <td>Row 1, Column 1</td>
    </tr>
</table>
```

This will divide the page into two columns. We will use the left column as the menu section and the right column as the main content area for the page.

Creating Graphical Menus

1. Set the width of the first `<td>` in the table to 100 pixels.
2. Next add a hyperlink to the About Me web page that you had previously created.
   Write the following code inside the `<td>...</td>` tag to create a graphical hyperlink to the aboutme.html file.

```
<a href="aboutme.html"><img src="images/aboutme.gif" alt="About Me" /> About
Me</a>
```

3. Save your work and view the result of the code thus far in the browser.
4. Now add two other links to the menu section using the following specs:

Display Text	URL	image
USP	http://www.usp.ac.fj	home.png
XHTML	Activity2.html	xhtml.gif

5. Set the border attribute of the `<img>` tags to 0.
6. Add line breaks to put each hyperlink on a new line.

Filling in the Main Content Area

1. In the second `<td>` of the main table create another table with 1 Row and 2 Columns.
2. Set the width of the first `<td>` in this table to 80 pixels.
3. Enter Course: inside the first `<td>...</td>` tag. Enter IS221 – Web Applications Development inside the second `<td>...</td>` tags.
4. Save your work and view the result in the browser.
5. Following the previous steps, complete the table to achieve a layout similar to:

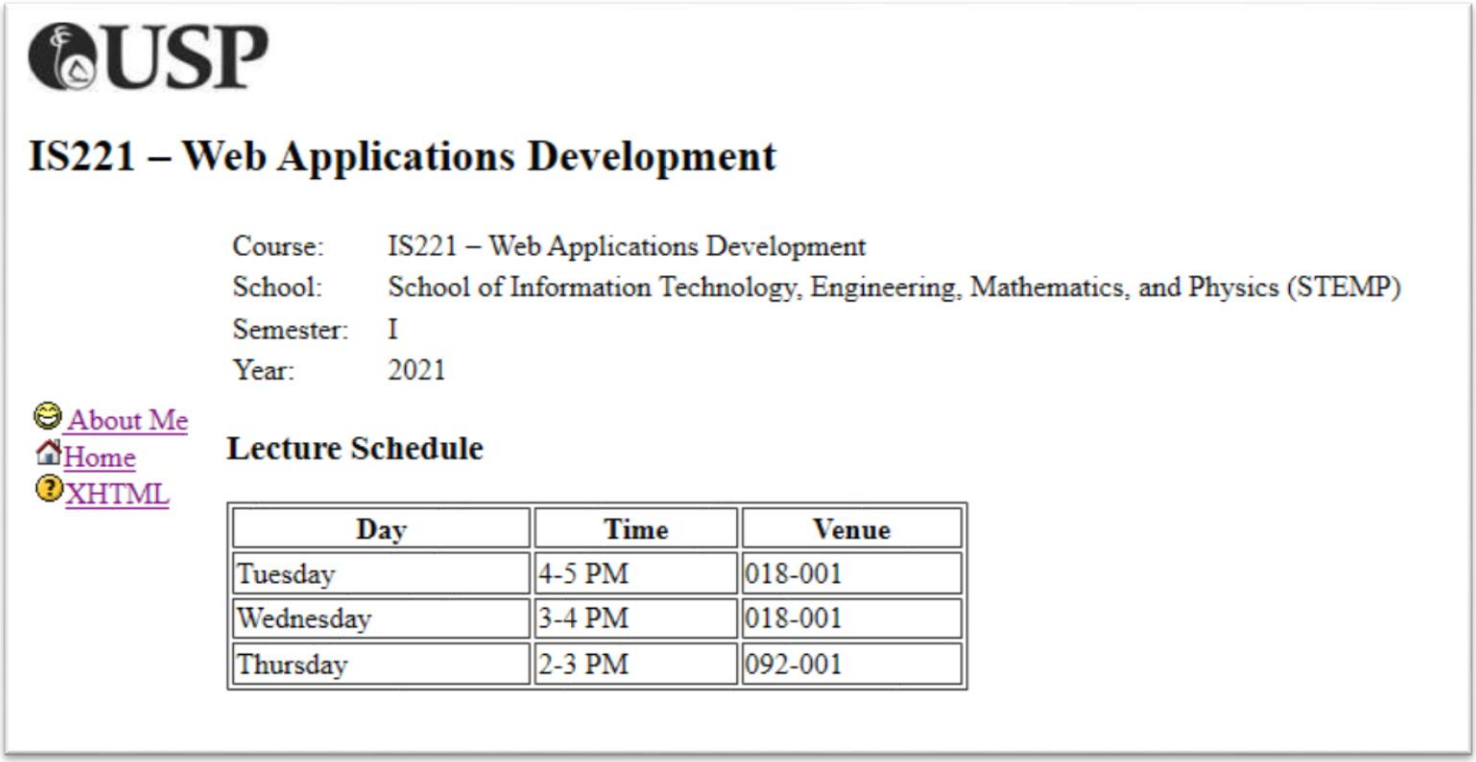
Course:	IS221 – Web Applications Development
School:	School of Information Technology, Engineering, Mathematics, and Physics (STEMP)
Semester:	I
Year:	2021

and then change the data elements.

6. After completing the previous table, add Lecture Schedule with level 3 heading.
7. Now add another table with a border of 1 pixel and a width of 400 pixels. Fill in the details of the table to get a result similar to:

Day	Time	Venue
Tuesday	4-5 PM	018-001
Wednesday	3-4 PM	018-001
Thursday	2-3 PM	092-001

8. Use <th> tag for table headings
9. Save your work and view your page on the browser it should look similar to the following screenshot.



USP

IS221 – Web Applications Development

Course: IS221 – Web Applications Development
School: School of Information Technology, Engineering, Mathematics, and Physics (STEMP)
Semester: I
Year: 2021

About Me
Home
XHTML

Lecture Schedule

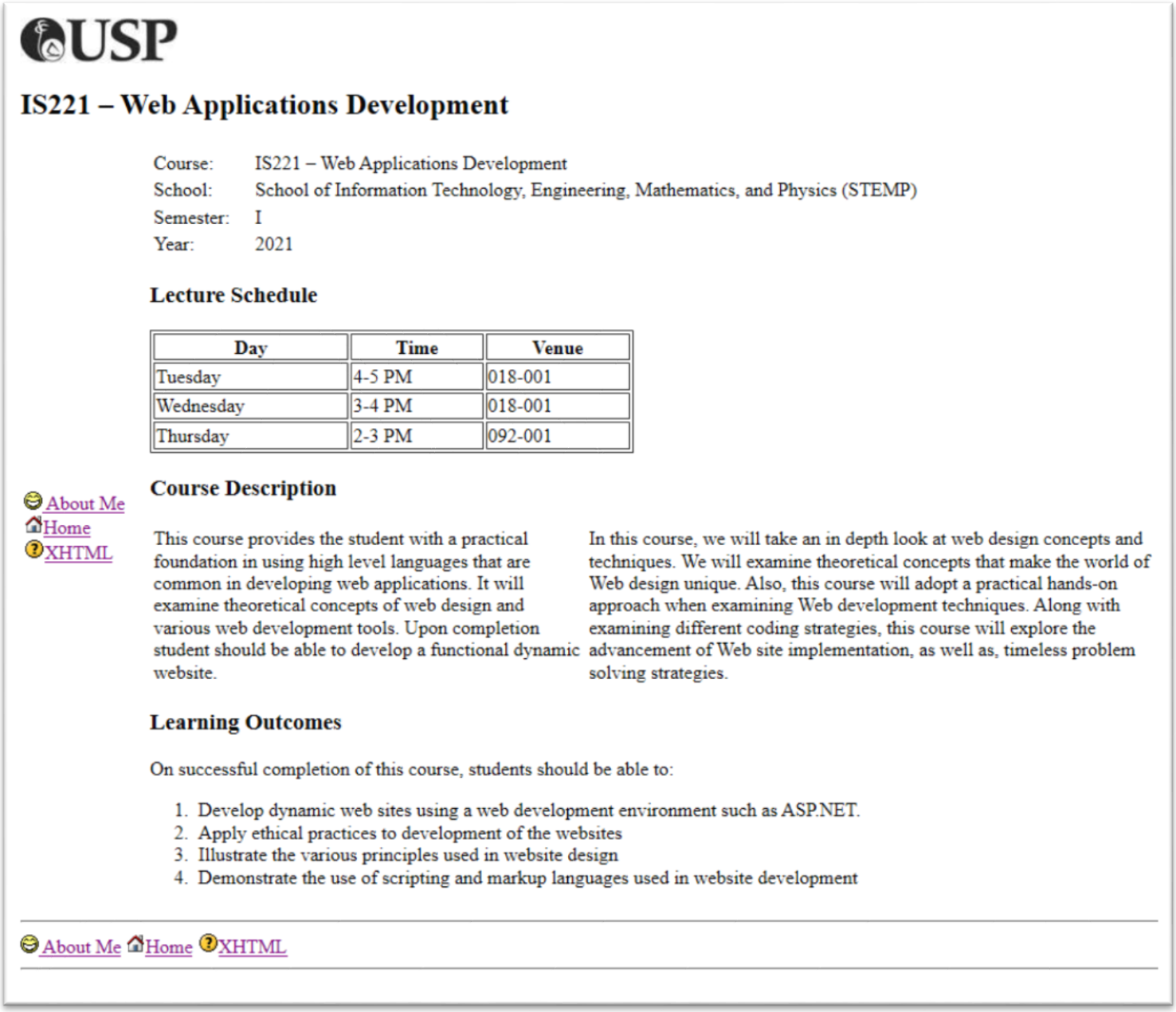
Day	Time	Venue
Tuesday	4-5 PM	018-001
Wednesday	3-4 PM	018-001
Thursday	2-3 PM	092-001

Achieving a 2-Column Layout

In this section you will use a table to divide the page into a two-column layout.

1. Add Course Description as a level 3 heading.
2. Now add another table of 1 Row and 2 Columns. Set the width to 90% and there will be no border for the table.
3. Copy the first paragraph under Course Description from the IS221.docx document and paste it between the first `<td>...</td>` tag.
4. Copy the second paragraph from the IS221.docx document into the second `<td>...</td>` tag.
5. Add a final level 3 heading for Learning Outcomes.
6. Create an ordered list and list the learning outcomes stated in the document.
7. Save your work and refresh the browser to view the updated web page.

The completed page will look similar to the following screenshot.



USP

IS221 – Web Applications Development

Course: IS221 – Web Applications Development
School: School of Information Technology, Engineering, Mathematics, and Physics (STEMP)
Semester: I
Year: 2021

Lecture Schedule

Day	Time	Venue
Tuesday	4-5 PM	018-001
Wednesday	3-4 PM	018-001
Thursday	2-3 PM	092-001

About Me
Home
XHTML

Course Description

This course provides the student with a practical foundation in using high level languages that are common in developing web applications. It will examine theoretical concepts of web design and various web development tools. Upon completion student should be able to develop a functional dynamic website.

In this course, we will take an in depth look at web design concepts and techniques. We will examine theoretical concepts that make the world of Web design unique. Also, this course will adopt a practical hands-on approach when examining Web development techniques. Along with examining different coding strategies, this course will explore the advancement of Web site implementation, as well as, timeless problem solving strategies.

Learning Outcomes

On successful completion of this course, students should be able to:

1. Develop dynamic web sites using a web development environment such as ASP.NET.
2. Apply ethical practices to development of the websites
3. Illustrate the various principles used in website design
4. Demonstrate the use of scripting and markup languages used in website development

About Me Home XHTML

1. Add a horizontal rule after the end of the main table.
2. Use a division for the footer section. Put a `<div>...</div>` tag after the horizontal rule.
3. Add another horizontal rule after the division. The horizontal rules will act as "borders".
4. Create the same three hyperlinks inside the `<div>...</div>` that you created in the Creating Graphical Menus section.

You can simply copy and paste the code from that section.

5. Ensure that all the links are on the same line. Use can use `nbsp;` to put spaces between the links.
6. Verify that your page validates using the W3C's Markup Validation Service. Correct and fix any errors, if necessary.

Compare the results of your web page with the screenshot given in the previous section. Ensure that all the links in the navigation menu are working correctly. Note that you have now successfully created your very first website!