§Web Programming

## Topic: HTML

## Introduction

## This worksheet is designed to encourage you to develop your web page writing and design skills.

Your tutor will help you by demonstrating what is required and also answer any questions you may have.

**Pre-requisite:** You can save and run your web pages using a web browser from anywhere on your computer disk. But it will be good if you can create all your web pages in htdocs/webprog folder. This means you should have xampp copied on your memory stick.

If you need help - **ask**. If you are curious - **ask**. If you want to know - **ask**.

You are encouraged to discuss the workshop with other students in the class. Share and Learn!

## What you must do

* We would like to learn HTML and the best way to learn is by creating your own web pages. So to make it more fun each student is expected to create their personal course website. This means you should create four (or more) linked web pages and each web page has material about individual module you’re studying in year 1 (or 2). Your objective should be that you practice most (if not all) HTML elements. A good guide to follow is accessible from

<http://www.w3schools.com/html/html_intro.asp>

You should work in pairs (two or three students). A good way to start is to design your website on paper e.g. main page, other pages, header/footer, possible contents, layout of pages, navigation (forward/backward), tables, images etc. Once your team agreed on the design then start developing your webpages. All of you should work together on the main or index page and the page which creates form elements (e.g. contact us) page. Then, each student should work on individual web page for each module but before you start:

* Agree on page names (i.e. file names) so that you can link them when working on individual pages
* Agree on overall template of your pages i.e. heading style, content style to have consistent look and feel (not important at this stage!)
* Coding style to improve your code readability

**Objective here is that you should have clear idea about how to develop websites using HTML.**

* Make sure you have access to the relevant sites/lectures
* Make sure you have bookmarked links to web help pages and references
* Quickly read HTML examples and/or any lectures on html (this week).
* Most important HTML element you must include/practice are:
  + <Doctype>, <html>, <head>, <title>, <body>, <a>, <table>, <img>, <p>, <h1>, <h2>, <span>, <br>, <ol>, <ul>, HTML entities, HTML colours
  + HTML forms - <http://www.w3schools.com/html/html_form_input_types.asp> with most input types including ‘text’, ‘password’, ‘submit’, ‘radio’, ‘checkbox’, ‘button’, ‘color’, ‘date’, ‘email’, ‘number’, ‘range’, ‘url’, ‘time’, etc
    - Also work on Input Restrictions e.g. disabled, max, maxlength, min, readonly, required, size, step, value etc.

## Step 1:

Please download and extract HTML Examples.zip in webprog folder.

Open .html files in a web browser. Try different browsers (e.g. Internet Explorer, Chrome, Firefox, Safari if available) to see if any item is not working! This may give you some idea that how HTML elements may show slightly different behaviour in different web browsers.

Read html code and try to understand behaviour of different HTML element and their attributes.

Try to make following changes in myFirstHTML.html:

1. In table – Kevin Pietersen’s photo is not accessible. Try to find an alternative image from internet, save it on your disk and replace it in the HTML code. Hint: look <img> tag.

2. Replace <a> tag where href="c:\myweb\web.html with a working html page from your local system.

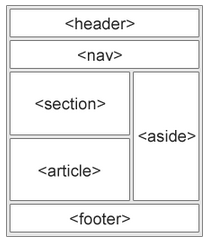
3. For form elements: try different restrictions, e.g. required, size etc. see list here: <http://www.w3schools.com/html/html_form_input_types.asp>

4. Convert unordered list <ul> with an ordered list <ol>

## Step 2:

Have a look at HTML5\_tags.html. And, where appropriate use new HTML 5 elements <http://www.w3schools.com/html/html5_semantic_elements.asp>

like <header>, <nav>, <section>, <article>, <footer>, <aside> etc.



## Step 3:

## Try different other HTML tags, attributes and restrictions and the best way to learn HTML is by developing your own website. For example, you can create one page for each module you’re learning. OR you can create a website for different sports you like. Have a navigation menu to navigate through different pages. Try creating a contact us form page. You can follow following instructions to complete your website pages.

## Using anchors <a>

* Build a web page that lists to as many search engines as you can find with links to each one.
* Make sure the links actually work
* Your list should contain a brief comment about each site.
* Your web pages should now begin to look both attractive and informative.

You could call your page **search.html** and later include in your course website.

## Tables <table>

You can create main or index.html page and use a table to show all of your modules, the module name and any other information (what you think of the module or related books or online resource, for example.)

* Experiment with the **<table>** tags and their attributes.
* You will need to get proficient at HTML tables
* Make a few versions of this page - - these versions will be a useful
* (self)reference.

## Images

Check the above example (myFirstHTML.html) and, when you are clear, make web pages which show images e.g. title cover of relevant books for each module.

You can get images from any website which has them by using the Right Mouse Button

and **Save Image As ...** save the image into your **xampp/htdocs/webprog** directory. Do check copyrights!

You can add these images in the modules table and create hyperlinks to specific online resources e.g. tutorial sites for specific topics for each module.

* You can search images using google search engine. For each module page find an image and get the URL for the image.
* You can use the Right Mouse Button to find the URL of an image (see **Properties**).
* You may have to combine the image URL with the site URL to get the absolute (full) URL.
* With Firefox you may be able to "Copy Image Location" - you can then Paste this into your web page when you are editing it

Continue collecting this information and build a table with links from images and

descriptions of each site – use your imagination to add contents for each module page.

You should make all of the images appear to be the same size using the **height**

and **width** attributes of **<img>**

Hints:

* Use real links from the images (found at www.bbc.co.uk/ )
* no borders
* **<img>** using **height** and **width** attributes
* **<td>** using **bgcolor**,
* **<th>** are in **<h2>** tags
* ... the permutations are endless!?

## Lists, Headings, Line breaks, colours and Paragraphs

Use lists (ordered <ol> or unordered <ul>) to show what topics you have covered for each module

Use appropriate heading <h1>, <h2> etc where needed

Use paragraphs <p> where needed

Use line breaks using <br>

Try to have different background colour for each page.

## Forms

Create a contact us page and try to use different form elements with different properties and restrictions. Forms are very important for our next lecture on Python CGI so give good time to learn different form elements.

**At the end of the practical session you must be able to understand different HTML tags (with semantics) and have created your own website. This means now you’re ready to move towards Python CGI.**