

## What You Will Learn

- How to create HTML documents
- Basic HTML structure
- Validation of a page

# Introduction to HTML

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## Submission Instruction

**This lab has five parts.** Complete them all.

Your submission (for marks) will be a Word document with your answers to **the questions in orange** and the **HTML file** that you create by following the steps.

Place both files in a folder and submit them to the Submit folder on AcadShare1 as described below.

### 1.1 Adding the basic structure

1. Create a folder called Lab01 in your H: drive.
2. Open an HTML editor (NotePad++, Brackets, Visual Studio Code, etc). Visual Studio Code is recommended. When writing your code make sure to use indentation properly for nested elements.
3. Start by adding the HTML5 DOCTYPE declaration.
4. Add the HTML root element by adding an **<html>** start tag and an **</html>** end tag.
5. Within the **<head>** element, add the title, “Game Portal”. Use indentation to properly show the nested elements.
6. Add the body element and add the following text in the body as a paragraph.

Welcome to Game Portal, a comprehensive resource for serious gamers. This site contains reviews, news, and other information on all types of computer games.

7. Save the file as **index.html** in lab01 folder (the folder you just created in Step 1).

8. The file will look like the following:

```
1  <!DOCTYPE html>
2  <html lang="en">
3  |  <head>
4  |  |  <title>Game Portal</title>
5  |  </head>
6
7  |  <body>
8  |  |  <h1>Game Portal</h1>
9  |  |  <p>
10 |  |  |  Welcome to Game Portal, a comprehensive resource for serious gamers.
11 |  |  </p>
12 |  </body>
13
14 </html>
15
```

9. Open the file index.html with a browser.

10. Switch back to your text editor.

Position cursor before “This site contains...” and then press **Enter** three times.

Position cursor after the word Welcome and press space five times.

Position your cursor just after the **<h1>** tag and insert 10 spaces.

Position your cursor within the **<p>** tag and insert 20 spaces between the **p** and the **>**.

11. Save the changes and then switch back to the browser. Refresh the page.

**Describe the rules for HTML white space evidenced by your efforts in step 10.  
AKA, when does white space matter?**

12. Remove the extra spaces and returns added in step 10. Save changes.

13. Look up how and where to add meta tags from a authoritative site like <https://www.w3.org/>

Add meta tags for **keywords**, **description** and **author** to your page. Include appropriate content for these tags. NOTE: Meta tags are not shown in the example code of this lab.

1.4 Be sure to include the author tag as one of your meta tags.

## 1.2 Defining Text Elements

1. Change your file by adding the following to your file (new code is shown in **blue**).

```
<body>
  <h1>Game Portal</h1>
  <p>
    Welcome to Game Portal, a comprehensive resource for serious gamers. This site contains reviews,
    news, and other information on all types of computer games.
  </p>

  <h2>Top Story</h2>
  <h3>Starcraft 2</h3>
  <p>
    StarCraft II continues the epic saga of the Protoss, Terran, and Zerg. These three distinct and powerful
    races will clash once again in the fast-paced real-time strategy sequel to the legendary original, StarCraft.
  </p>
  <p>
    StarCraft II will present a cast of new heroes and familiar faces in an edgy sci-fi story filled with
    adventure and intrigue. In addition, Blizzard will again offer unparalleled online play through Battle.net,
    the company's world-renowned gaming service, with several enhancements and new features to make
    StarCraft II the ultimate competitive real-time strategy game.
  </p>
  <h2>Top Reviews</h2>
  Fallout 3<br>
  Age of Mythology<br>
  Steel Fury<br>
  <hr>
</body>
```

NOTE: The **<h1>**, **<h2>** and **<h3>** tags are used to indicate headings. The **<p>** tag is used to indicate a paragraph. The **<br>** tag indicates a line break.

2. Save and test file in browser. The result should look similar to that shown below.

The screenshot shows a website titled "Game Portal". A "Top Story" section discusses StarCraft II, mentioning the Protoss, Terran, and Zerg races. Below it, a "Top Reviews" section lists three games: Fallout 3, Age of Mythology, and Steel Fury.

3. Remove the trailing `</h1>` end tag, save and then test.

4. Put back the trailing `</h1>` end tag (i.e., after Game Portal).

5. What happens if you change `<h2>` to `<H2>`?

**In your lab report, describe what happens when you leave out a trailing tag and what tag capitalization effects. Confirm the 'rule'/conventions expected by w3.org (and informally cite this source with a footnote).**

6. Before the text Zerg add the tag `<bogus>` and close it right after Zerg. Save and then test in a browser. Do you see any change?

**In your lab report, describe what happens with tags your browser does not recognize.**

7. After testing, remove the `<bogus>` tag.

### 1.3 Making a List

Lists are a way of organizing information. HTML supports several different types of lists: definition lists, ordered lists, and unordered lists.

1. Modify the document as follows:

```
<h2>Top Reviews</h2>
<ul>
  <li>Fallout 3</li>
  <li>Age of Mythology</li>
  <li>Steel Fury</li>
</ul>
<hr />
```

This will add an unordered list to your page. Notice that in `<ul>` it is a lowercase L not the number 1 in these tags.

2. Save and test it. Notice that the indenting shown in the list above doesn't affect the output in the browser. It is added to make the markup more readable for us, the developers.

3. Change the <ul> and </ul> to <ol> and </ol> and then test in browser. What changes do you see?

**Describe what these two kinds of lists are. When is it most appropriate to use each?**

4. Change the list back to an unordered list.

## 1.4 Creating a link to an external Webpage

In the list, add a hyperlink to the text “January 7 Holidays & National Days” to link it to [this web site](#). Save changes and test it in a browser. Look up how to make the link open a new tab and adjust the link accordingly.

**Research the <a> tag target attribute. Play with them. Describe what two of these targets do.**

## 1.5 Validating HTML files

In this exercise, we will use an external validation service to verify that our web page.

1. Open a browser and go to <http://validator.w3.org>
2. In the Validate by File Upload, click the Browse button and choose your index.html file.
3. Click the Check button.
4. If there are errors, please fix them.
  - One of the errors that you may get is about the character set meta tag. You need to add a meta tag to your head section.

**Note:** Before submitting your code, make sure that your code is readable and indented properly.

**Submission** Put all your files into a folder named *Lab01 lastname firstname* where lastname is your last name and firstname is your first name. Zip that folder and upload it to: I:Academic Files/ACADShare1/Labs/CompSci/Submit/2511/section 2.

**Enjoy**