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# COS 216 Practical Assignment 1

- Date Issued: **23 March 2021**
- Date Due: **12 April 2021** before **08:00**
- Submission Procedure: **Upload to the web server (wheatley) + clickUP**
- This assignment consists of **6 tasks** for a total of **70 marks**.

## 1 Introduction

During this practical assignment you will be designing and developing a web site that will showcase a Video Game Database similar to what can be seen from RAWG (<https://rawg.io>). Each assignment will build of the other in attempt to have a fully functional video game database listing website at the end of all the practicals. **NB: It is important that you do not miss any practicals or you will fall behind.**

After successful completion of this assignment you should be able to create a web page which complies to the HTML5 standards and CSS styling. The specific web page for this assignment will showcase the following functionality:

- a navbar from where navigation to each component/part for each assignment should be showcased;
- you should have the following tabs in the navbar: Trending, New Releases, Top Rated, Featured and Calendar which each go to the specific HTML page.
- an “under construction” page which is the page displayed if the assignment/tab has not as yet been completed;

**NB: Each component/part must be linked to the navbar. See Task 2 for further details.**

## 2 Constraints

1. You must complete this assignment individually.
2. You may ask the Teaching Assistants for help but they will not be able to give you the solutions.
3. You must produce all of the source files yourself; you may not use any tool to generate source files or fragments thereof automatically.
4. You may not use any frameworks for this practical or any JavaScript.
5. Your assignment will be viewed using Brave Web Browser (<https://brave.com/>) so be sure to test your assignment in this browser. Nevertheless, you should take care to follow published standards and make sure that your assignment works in as many browsers as possible.
6. You may utilize any text editor or IDE, upon an OS of your choice, again, as long as you do not make use of any tools to generate your assignment.
7. All written answers must be typed and clearly visible in the HTML of the web page, **no** paper based or PDF marking will be done.
8. All written code should contain comments including your name, surname and student number at the top of each file.
9. Your assignment must work on the **wheatley** web server, as you will be marked off there, you may **not** demo off your laptop or a local copy.

### 3 Submission Instructions

You are required to upload all your source files (e.g. HTML5 documents, any images, etc.) to the web server (**wheatley**) and clickUP in a compressed (zip) archive. Make sure that you test your submission to the web server thoroughly. All the menu items, links, buttons, *etc.* must work and all your images must load. Make sure that your practical assignment works on the web server before the deadline. No late submissions will be accepted, so make sure you upload in good time. The server will not be accepting any uploads and updates to files from the stipulated deadline time until the end of the marking week (Friday at 3pm).

**The deadline is on Sunday but we will allow you to upload until Monday 8am. After this NO more submissions will be accepted.**

**Note, wheatley is currently available from anywhere. But do not rely that outside access from the UP network will always work as intended.** You must therefore make sure that you ftp your assignment to the web server. Also make sure that you do this in good time. A snapshot of the web server will be taken just after the submission was due and only files in the snapshot will be marked.

### 4 Online resources

**HTML5** - <https://developer.mozilla.org/en-US/docs/Web/Guide/HTML/HTML5> and <http://www.w3schools.com/>

**CSS** - <http://www.w3.org/Style/Examples/011/firstcss>

**HTML and CSS** - <http://www.codecademy.com/en/tracks/web>

**Standards compliance** - <http://validator.w3.org/>, <https://jigsaw.w3.org/css-validator/>

**FTP tutorial** - <http://www.cyberciti.biz/faq/linux-unix-ftp-commands/>

### 5 Rubric for marking

<b>Setup web server</b>	5
<b>Launch Page + Navbar</b>	
Layout + Logo	3
Navbar	2
<b>Trending Page</b>	
CSS	10
Layout	15
<b>New Releases Page</b>	
CSS	3
Layout	7
<b>Top Rated Page</b>	
CSS	3
Layout	7
<b>Featured Page</b>	
CSS	3
Layout	7
<b>HTML5 compliance</b>	3
<b>CSS compliance</b>	2
<b>Upload</b>	
<b>Does not work on wheatley</b>	<b>-10</b>
<b>Not uploaded to clickUP</b>	<b>-20</b>
<b>Total</b>	<b>70</b>

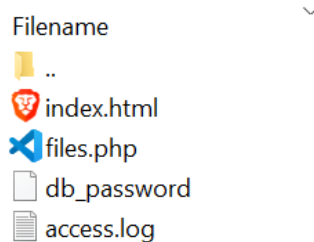
## 6 Assignment Instructions

### Task 1: Setup the web sever ..... (5 marks)

The first time you **ftp** into the web server, your home folder will be created with a few files: *db\_password*, *files.php*, *index.html* and/or *access.log* and *error.log*. Do **NOT** delete these files as they won't be created again and will be used in a later practical involving PHP. Complete the following steps to setup the web server:

**Step 1:** **ftp** into the web server, **wheatley.cs.up.ac.za**, using your user name and password that you use to login to the CS website.

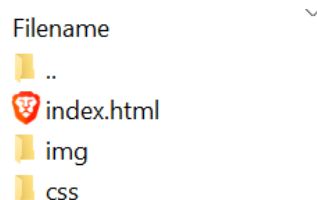
**Step 2:** Check whether the **access.log**, **error.log** files reside in your web server folder. Don't worry if they don't appear in your folder yet. Your directory should look similar to the following:



**Step 3:** Create a folder and name it **"COS216"**. Note that subsequent files and folders that you would create for the various practical and homework assignments should be contained in this folder.

**Step 4:** For each practical assignment you will need to have a separate folder. This means that you would have to create a copy of your website each practical and then build on it. You will be penalised if you do not follow this rule. For this practical assignment you should create a folder inside your COS216 folder and name it **"PA1"**.

**Step 5:** For each practical assignment you should have your home page *index.html* (or any other suitable name) in the relevant PA folder. You should also separate all your resources into their own different folders (eg. *img*, *css*, *js*, etc.) within this folder. Your PA1 directory should look similar to the following:

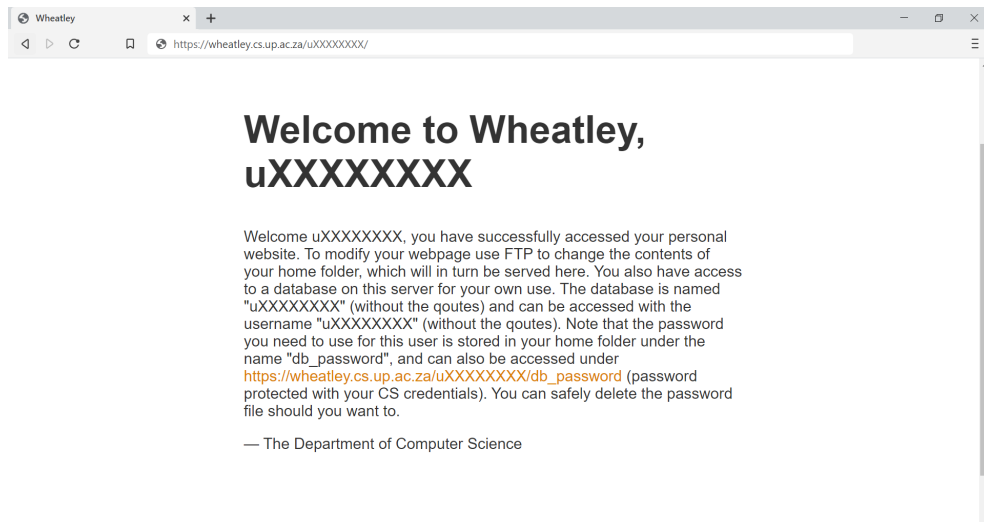


**Step 6:** Check whether you can access your home folder via the web server by going to:

<http://wheatley.cs.up.ac.za/uXXXXXXXX/>, where XXXXXXXX is your student/employee number, in your web browser. You should see a pop-up that will ask you to login. The login details are the same as the CS website login. You will see something similar to the following:

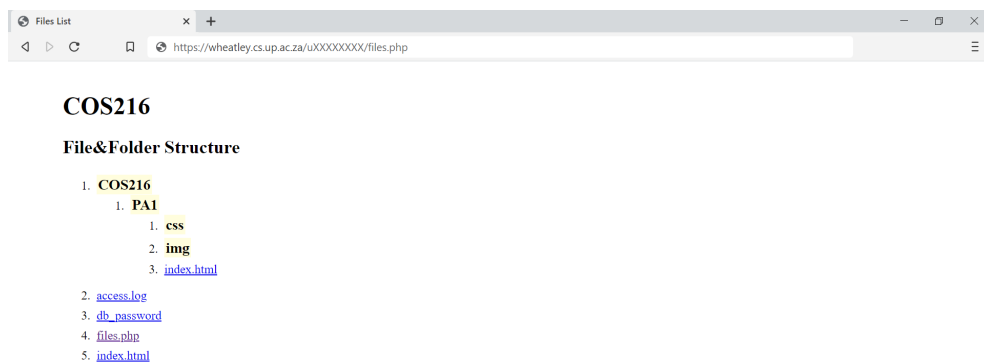


**Step 7:** Once logged in, you will see something similar to the following:



This page will serve as the launch page for your Game database (see Task 2 for more details).

**Step 8:** Check that your file listing is correct on the web server by going to: <http://wheatley.cs.up.ac.za/uXXXXXXXX/files.php>, where XXXXXXXX is your student/employee number, in your web browser. You will see something similar to the following:



**NB: if there is no filename specified in the url don't forget to add the '/' to the end.**

## Task 2: Create a Launch Page and Navbar ..... (5 marks)

This task requires you to create a Launch page and Navbar that will link each assignment (and their pages) that you will be required to complete for COS216 this semester.

Your launch page will serve as the navigation to your Game database website. Choose a name wisely and make a logo for your website. Other than the page being intuitive to use, you need to design it to be aesthetically pleasing. You will be graded according to how the layout is chosen, use of colour, images, design, etc.

The page should include links to all your practical assignments i.e. a link that takes you to the home page for PA1, PA2, and so on. Remember to include an "Under Construction" page if the assignment has not been completed yet.

Save the HTML5 code for this page in a file called **index.html** and place it in the same directory on the web server as which **files.php**, **access.log**, **error.log** are in (you should already have an **index.html** file in the home directory so you can just update this). View the page on **wheatley**. You should be able to access your page using <http://wheatley.cs.up.ac.za/uXXXXXXXX/>

Alternatively you can call the page directly using the following url in your web browser:  
<http://wheatley.cs.up.ac.za/uXXXXXXX/index.html>

You should create a navigation bar that will link the pages for each practical assignment i.e. it will contain links that take you to the Trending, Top Rated, etc. pages. Make provision for the following pages: Trending, New Releases, Top Rated, Featured and Calendar. You should make use of an HTML 5 Navbar ([https://www.w3schools.com/html/html5\\_semantic\\_elements.asp](https://www.w3schools.com/html/html5_semantic_elements.asp)).

**Note: The Navbar needs to be available on each page.** You cannot use JavaScript or PHP in this practical. Remember to include an "Under Construction" page if the page has not been completed yet.

### Task 3: Create a 'Trending' page ..... (25 marks)

For this task you are required to make and design the "Trending" page. This page simply shows games based on what is commonly searched and filtered. You should make use of mock data to populate your webpage. **This page will also serve as the home page of your website.**

**NB: You may NOT copy the design of existing websites but should rather use your own creativity.**

Your page should have the following information:

- Searchbar - You should only have styled elements, no functionality needs to be implemented in this practical
- Filters (at least 2) - You should only have styled elements, no functionality needs to be implemented in this practical
- Each game should have the following:
  - Game Artwork - an image of the game
  - Title
  - Developer - the company that developed the game
  - Release Date
  - Rating
  - Genre/s
  - Platforms - for example, PS5, Xbox One, PC, etc.
  - Tags - at least 3

Your page should at least have 5 mock game elements. Marks will be given according to layout, design, usage of colours and other factors.

The following CSS functionality needs to be incorporated into your design. You are free to add more styling as you prefer but remember it must still look professional.

- Backgrounds - colors, images, etc.
- Fonts - at most 3 and must be readable. Have a look at importing fonts instead of using the standard HTML fonts
- Text - color and size
- Boxes - should include padding, margins, shadows and/or borders

### Task 4: Create a 'New Releases' page ..... (10 marks)

For this task you are required to make and design the "New Releases" page. This page shows newly released games. You should make use of **different** mock data from the Trending page to populate your webpage.

**NB: You may NOT copy the design of existing websites but should rather use your own creativity.**

Each game should have the following:

- Game Artwork - an image of the game
- Developer - the company that developed the game
- Game URI - the game's official website
- Age Rating
- Genre/s
- Platforms - for example, PS5, Xbox One, PC, etc.
- System Requirements - minimum/recommended requirements

The following CSS functionality needs to be incorporated into your design and should use more advanced CSS styling. You are free to add more styling as you prefer but remember it must still look professional.

- Links - must be styled (no default text color, underline, etc.). The styling should also change when the user hovers over the link
- Lists
- Icons - can be added via icon libraries such as Font Awesome (<https://fontawesome.com>)
- Tooltip - provide the name and rating of the game in a tooltip when the user hovers over the game artwork

#### **Task 5: Create the "Top Rated" Page** ..... (10 marks)

For this task you are required to make and design the "Top Rated" page. This page simply shows games that are top rated based on Metacritic ranking (<https://www.metacritic.com/browse/games/score/metascore>). Your page may display the Top Rated games for the year, month, of all time, etc.

**NB: You may NOT copy the design of existing websites but should rather use your own creativity.**

Each game should have the following:

- Game Artwork - an image of the game
- Title
- Developer - the company that developed the game
- Genre/s
- Metacritic Ranking
- Platforms - for example, PS5, Xbox One, PC, etc.

**Note: Don't forget to add your own styling to this page as well.**

#### **Task 6: Create the "Featured" Page** ..... (10 marks)

For this task you are required to make and design the "Featured" page. This page simply shows games that have received high reviews and recommendations.

**NB: You may NOT copy the design of existing websites but should rather use your own creativity.**

Each game should have the following:

- Game Artwork - an image of the game
- Title
- Developer - the company that developed the game
- Release Date
- Description
- Genre/s
- Game Clip/Trailer - Provide a sample clip of the game (you can use the YouTube service). You can use an HTML embed tag, iframe or video tag for this purpose.

**Note: Don't forget to add your own styling to this page as well.**