

COMP 3015: Web Application Development

Lab 1

The purpose of this lab is to gain some familiarity with how PHP can be used to write **server-side** rendered web applications. **Important:** PHP code does not run in the browser. PHP code runs on the server-side, and we send the generated HTML (or JSON, text, or else whatever our application generates) from the server to the client, in order to fulfil a given request.

As part of this lab we will also try to configure Xdebug. Please see [this YouTube](#) video I've created on the process.

Part 1

Instructions:

1. Ensure your environment is configured with PHP 8.3.x
 - a. On the command line, try running "php -v"
2. Write a PHP script to output your favourite movies or TV shows, and associated dates aired. The movies/shows can be stored in a hardcoded array for now. Later we will use files, and then a database instead of hardcoded data.
 - a. Note that learning about associative arrays is critical for PHP development. Associative arrays are used all over the place including when retrieving data from a database.
3. Any shows with null or empty strings for the name or dates should not be printed.
4. You must complete the "**filterInvalidShows**" function. Tip: use a foreach loop. Note that you don't have to pass-by-reference for the lab.
5. Output the show data within the HTML portion of the document. Bold the name of the show/movie. Again, I advise you to use a foreach loop to cycle through the filtered array.

Note: there is a lab 1 starter kit on D2L under the week 1 content.

Requirements:

The associative array in your program should be along the lines of:

```
$shows = [  
    'Seinfeld' => 'July 5th, 1989 - May 14th, 1998',  
    'Curb Your Enthusiasm' => 'October 15th, 2000 - Current',  
    'The Simpsons' => 'December 17, 1989 - Current',  
    'Invalid data2' => null,  
    null => 'December 17, 1999 - Current',  
    '' => 'December 17, 1999 - Current',  
];
```

Note the last 4 entries are deemed to be invalid due to nulls or empty strings. The above should output:

Shows

Seinfeld: July 5th, 1989 - May 14th, 1998

Curb Your Enthusiasm: October 15th, 2000 - Current

The Simpsons: December 17, 1989 - Current

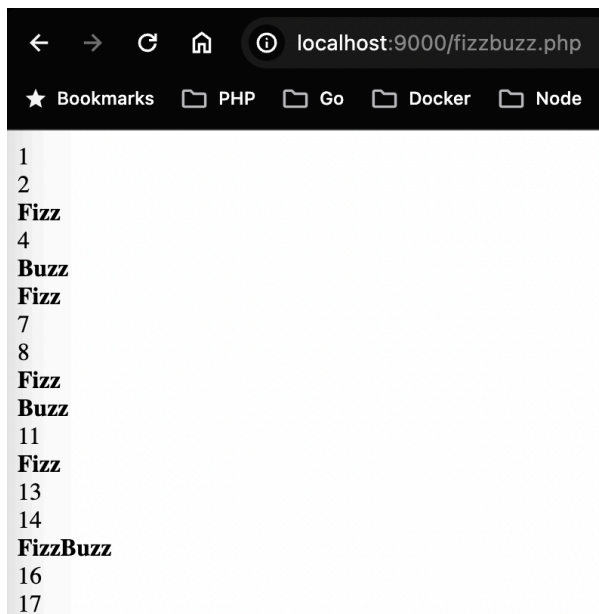
Part 2

Instructions:

Implement a [FizzBuzz](#) program in PHP.

The goal of this program is to output numbers 1-100, but replace any number that is divisible by 3 with the output of “Fizz”, any number that is divisible by 5 with “Buzz”, and any number which is divisible by both 3 and 5 with “FizzBuzz”.

The first bit of output of your application should look like:



```
localhost:9000/fizzbuzz.php
★ Bookmarks  PHP  Go  Docker  Node
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
11
Fizz
13
14
FizzBuzz
16
17
```

...

Requirements:

- Bold “Fizz”, “Buzz”, “FizzBuzz” outputs
- Ensure you use the “alternative syntax” described here:
<https://www.php.net/manual/en/control-structures.alternative-syntax.php>
 - In general, this is the syntax that we want to use when dealing with control flow for conditionally rendering HTML content.
- Use the “identical operator” (===) for comparisons
 - Try to avoid using the “equal operator” (==), which compares after type juggling
- Ensure you make use of a loop and the modulo operator, which returns the remainder of division (eg. 15 % 3 is 0, and 100 % 3 is 1)
 - See: <https://www.php.net/manual/en/language.operators.arithmetic.php>
 - No hard coding the numbers!

Use your browser development tools to inspect the request that is made to the server.
What's in the response? Any PHP code?

Ask for help if you're stuck! That's what I'm here for.

Submission:

- Submit a GitHub link to D2L.
- Due before the week 2 class.

Evaluation:

- Total / 10
 - Part 1 / 4
 - The show name, and associated dates must be displayed in the HTML document
 - Entries with null or empty strings should not be printed
 - The name of the show is bolded
 - Code is reasonably formatted (indent properly!)
 - Part 2 / 4
 - The output is correct in terms of number replacement
 - Code is reasonably formatted
 - Alternative control structure syntax is used
 - Xdebug / 2
 - Add a screenshot of using Xdebug to your GitHub repository (eg. paused on a breakpoint)