

Homework: PHP Associative Arrays and Strings

This document defines the homework assignments from the [“PHP Basics” Course @ Software University](#). Please submit as homework a single **zip** / **rar** / **7z** archive holding the solutions (source code) of all below described problems.

Problem 1. Word Mapping

Write a PHP program **WordMapper.php** that takes a text from a textarea **with attribute name="input"** and prints each word and the number of times it occurs in the text. The search should be **case-insensitive**. The result should be printed as an **HTML table with border attribute set to 2**. If you get 0/100 in judge check in details the zero test.

Input	Output																
The quick brows fox.!!! jumped over.// the lazy dog.!																	
<div><div>The quick brows fox.!!! jumped over.// the lazy dog.!</div><div>Count words</div></div>	<table><tr><td>the</td><td>2</td></tr><tr><td>quick</td><td>1</td></tr><tr><td>brows</td><td>1</td></tr><tr><td>fox</td><td>1</td></tr><tr><td>jumped</td><td>1</td></tr><tr><td>over</td><td>1</td></tr><tr><td>lazy</td><td>1</td></tr><tr><td>dog</td><td>1</td></tr></table>	the	2	quick	1	brows	1	fox	1	jumped	1	over	1	lazy	1	dog	1
the	2																
quick	1																
brows	1																
fox	1																
jumped	1																
over	1																
lazy	1																
dog	1																

Problem 2. Count Real Numbers

Read a **list of real numbers with fgets(STDIN)** and **print them in ascending order** along with their **number of occurrences**.

Examples

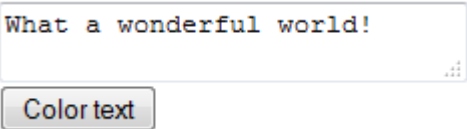
Input	Output	Input	Output	Input	Output
8 2.5 2.5 8 2.5	2.5 -> 3 times 8 -> 2 times	1.5 5 1.5 3	1.5 -> 2 times 3 -> 1 times 5 -> 1 times	-2 0.33 0.33 2	-2 -> 1 times 0.33 -> 2 times 2 -> 1 times

Hints

- Pass through each input number **num** and increase **counts[num]** (when **num** exists in the array) or assign **counts[num] = 1** (when **num** does not exist in the dictionary).
- Pass through all numbers **num** in the array and print the number **num** and its count of occurrences **counts[num]**.
- Use `ksort()` to sort associative array by keys.


Problem 3. Coloring Texts

Write a PHP program **TextColorer.php** that takes a text from a textfield **with attribute name="input"** , colors each character according to its ASCII value and prints the result. If the ASCII value of a character is odd, the **character** should be printed in **blue**. If it's even, it should be printed in **red**.For the colors **use the tag**.

Input	Output
What a wonderful world!	W h a t a w o n d e r f u l w o r l d !
	

Problem 4. Navigation Builder

Write a PHP program **Navigation.php** that takes data from several input fields and builds 3 navigation bars. The input fields are **categories with attribute name="categories"**, **tags with attribute name="tags"** and **months with attribute name="months"**. The first navigation bar should contain a list of the **categories**, the second navigation bar – a list of the **tags** and the third should contain the **months**. The entries in the input strings will be separated by a **comma and space ", "**. When you print your result don't forget to **use <h2> tag for "Categories", "Tags", and "Months"**. Semantic HTML is required.

Input		Output
categories	Knitting, Cycling, Swimming, Dancing	
tags	person, free time, love, peace, protest	
months	April, May, June, July	

	<h2>Categories</h2> <ul style="list-style-type: none"> • Knitting • Cycling • Swimming • Dancing <h2>Tags</h2> <ul style="list-style-type: none"> • person • free time • love • peace • protest <h2>Months</h2> <ul style="list-style-type: none"> • April • May • June • July
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Problem 5. Text Filter

Write a PHP program **TextFilter.php** that reads a **text** and a **string of banned words** from the console with **fgets(STDIN)**. All words included in the ban list should be replaced with **asterisks** "*", equal to the word's length. The entries in the banlist will be separated by a **comma** and **space** ", ".

Input		Output
text	It is not Linux , it is GNU/ Linux . Linux is merely the kernel, while GNU adds the functionality. Therefore we owe it to them by calling the OS GNU/ Linux ! Sincerely, a Windows client	It is not *****, it is GNU/*****, ***** is merely the kernel, while GNU adds the functionality. Therefore we owe it to them by calling the OS GNU/*****! Sincerely, a ***** client
banlist	Linux, Windows	

Problem 6. *Sentence Extractor

Write a PHP program **SentenceExtractor.php** that reads a **text** and a **word** with **fgets(STDIN)** and prints **all sentences from the text, containing that word**. A sentence is any sequence of words ending with **„.“**, **„!“** or **„?“**.

Input		Output
text	This is my cat! And this is my dog. We happily live in	This is my cat!

	Paris – the most beautiful city in the world! Isn't it great? Well it is :)	And this is my dog.
word	is	

Problem 7. **URL Replacer

Write a PHP program **URLReplacer.php** that reads a text with **fgets(STDIN)** and **replaces all URLs** with the HTML syntax **** with a special forum-style syntax **[URL=...][/URL]**.

Input		Output
text	<p><p>Come and visit the Software University to master the art of programming. You can always check our forum if you have any questions.</p></p>	<p><p>Come and visit [URL=http://softuni.bg]the Software University[/URL] to master the art of programming. You can always check our [URL=www.softuni.bg/forum]forum[/URL] if you have any questions.</p></p>