

# Homework: PHP Working with Forms

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. Print Tags

Write a PHP script **PrintTags.php** which generates an HTML **input text field** and a **submit button**. In the text field the user must enter different tags, separated by a comma and a space (", "). When the information is submitted, the script should **split the tags**, put them **in an array** and **print out the array**. Semantic HTML is required. Styling is not required. Example:

Input	Output
<p>Pesho, homework, homework, exam, course, PHP</p> <p>Enter Tags:</p> <input type="text" value="Pesho, homework, homework, exam, course, PHP"/> <input type="button" value="Submit"/>	<p>Enter Tags:</p> <input type="text"/> <input type="button" value="Submit"/>
	<p>0 : Pesho 1 : homework 2 : homework 3 : exam 4 : course 5 : PHP</p>

## Problem 2. Most Frequent Tag

Write a PHP script **MostFrequentTag.php** which generates an HTML **input text field** and a **submit button**. In the text field the user must enter **different tags**, separated by a comma and a space (", "). When the information is submitted, the script should generate a **list of the tags**, sorted **by frequency**. Then you must print: **"Most Frequent Tag is: [most frequent tag]"**. Semantic HTML is required. Styling is not required. Example:

Input	Output
<p>Pesho, homework, homework, exam, course, PHP</p> <p>Enter Tags:</p> <input type="text" value="Pesho, homework, homework, exam, course, PHP"/> <input type="button" value="Submit"/>	<p>Enter Tags:</p> <input type="text"/> <input type="button" value="Submit"/>
	<p>homework : 2 times PHP : 1 times course : 1 times exam : 1 times Pesho : 1 times</p> <p>Most Frequent Tag is: homework</p>

## Problem 3. Calculate Interest

Write a PHP script **CalculateInterest.php** which generates an HTML page that contains:

- An input text field to hold the **amount of money**
- Radio buttons to choose the **currency**
- An input text field to enter the **compound annual interest amount**
- A dropdown menu to choose the **period of time**
- A **submit button**

When the **information is submitted**, the script should print out the **amount of money** you will have after the selected period, rounded to 2 decimal places. Semantic HTML is required. Styling is not required. Example:

Preview	Input	Output
<div>Enter Amount <input type="text"/></div> <div><input type="radio"/> USD <input type="radio"/> EUR <input type="radio"/> BGN</div> <div>Compound Interest Amount <input type="text"/></div> <div><div>6 Months</div><div>6 Months</div><div>1 Year</div><div>2 Years</div><div>5 Years</div></div> <div>Calculate</div>	<div>1000</div> <div>USD</div> <div>12</div> <div>6 months</div>	<div>\$ 1061.52</div> <div>Enter Amount <input type="text"/></div> <div><input type="radio"/> USD <input type="radio"/> EUR <input type="radio"/> BGN</div> <div>Compound Interest Amount <input type="text"/></div> <div><div>6 Months</div><div>Calculate</div></div> <div>\$ 1061.52</div>

**Hint:** How to calculate **compound interest**? You may read the [Wikipedia article](#) or see the **example below**.

### Explanation of the example:

We have Compound Annual Interest of 12%. This makes 1% interest per month. This means that each month for a 6 months' period of time we accrue interest of 1% on the current amount of money. Given the input from the example, the result would be:

Month	Calculations	Amount of Money
1 <sup>st</sup>	1000 * 101%	1010
2 <sup>nd</sup>	1010 * 101%	1020.1
3 <sup>rd</sup>	1020.1 * 101%	1030.301
4 <sup>th</sup>	1030.301 * 101%	1040.60401
5 <sup>th</sup>	1040.60401 * 101%	1051.0100501
6 <sup>th</sup>	1051.0100501 * 101%	1061.520150601

After the **6<sup>th</sup> month** we have **1061.520150601 USD** in our account. We **round the result** and add the symbol **"\$"** for USD. The output is **\$ 1061.52**.

## Problem 4. HTML Tags Counter

Write a PHP script **HTMLTagsCounter.php** which generates an HTML form like in the example below. It should contain a **label**, an **input text field** and a **submit button**. The user **enters HTML tag** in the input field. If the tag is valid, the script should print **"Valid HTML tag!"**, and if it is invalid – **"Invalid HTML Tag!"**. On the second line, there should be a **score counter**. For every valid tag entered, the score should increase by 1.

**Hint:** You may use **sessions**. Use an **array** to store all valid **HTML5 tags**.

Correct Tag	Incorrect Tag
<p>Enter HTML tags:</p> <div>body</div> <div>Submit</div> <p><b>Valid HTML tag!</b> <b>Score: 13</b></p>	<p>Enter HTML tags:</p> <div>bodybuilder</div> <div>Submit</div> <p><b>Invalid HTML tag!</b> <b>Score: 14</b></p>

## Problem 5. CV Generator

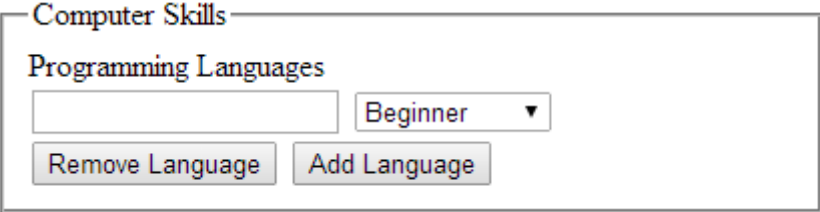
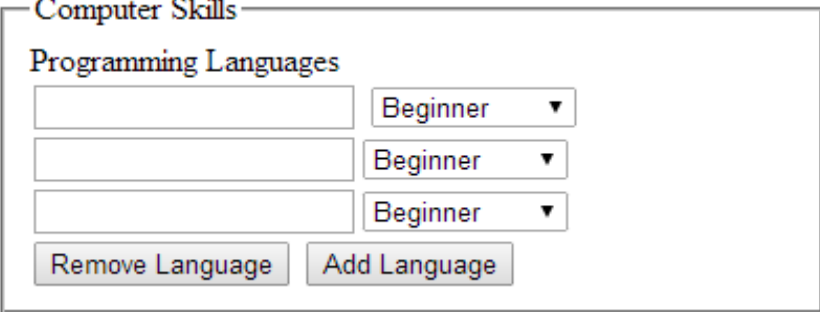
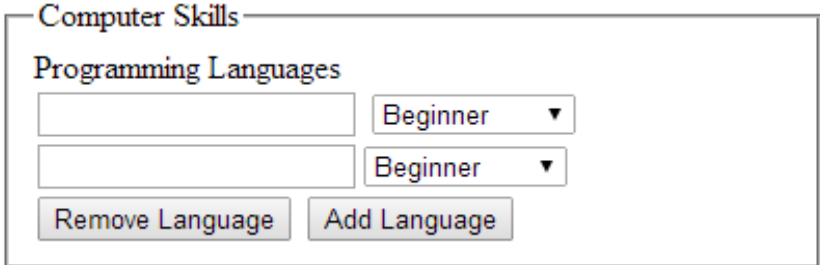
Write a PHP script **CVGenerator.php** which generates an HTML form like in the example below. When the **information is submitted** (via Generate CV), the script should print out a **simple table-like CV**. Semantic HTML is required. Styling is not required. Example:

Input	Output																																												
<div> <div>Personal Information</div> <div> <div>First Name</div> <div>Last Name</div> <div>Email</div> <div>Phone Number</div> <div>Female <input type="radio"/> Male <input type="radio"/></div> <div>Birth Date</div> <div>dd/mm/yyyy</div> <div>Nationality</div> <div>Bulgarian</div> </div> </div> <div> <div>Last Work Position</div> <div> <div>Company Name</div> <div>From</div> <div>To</div> </div> </div> <div> <div>Computer Skills</div> <div> <div>Programming Languages</div> <div> <div>Beginner</div> <div>Remove Language</div> <div>Add Language</div> </div> </div> </div> <div> <div>Other Skills</div> <div> <div>Languages</div> <div> <div>-Comprehension-</div> <div>-Reading-</div> <div>-Writing-</div> </div> <div> <div>Remove Language</div> <div>Add Language</div> </div> <div> <div>Driver's License</div> <div>B <input type="checkbox"/> A <input type="checkbox"/> C <input type="checkbox"/></div> </div> </div> <div> <div>Generate CV</div> </div> </div>	<div>CV</div> <div> <div>Personal Information</div> <table> <tr><td>First Name</td><td>Svetlin</td></tr> <tr><td>Last Name</td><td>Nakov</td></tr> <tr><td>Email</td><td>svetlin@nakov.com</td></tr> <tr><td>Phone Number</td><td>088888888888888</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Birth Date</td><td>1990-06-15</td></tr> <tr><td>Nationality</td><td>Indian</td></tr> </table> </div> <div> <div>Last Work Position</div> <table> <tr><td>Company Name</td><td>Kaspichan Software</td></tr> <tr><td>From</td><td>2013-01-01</td></tr> <tr><td>To</td><td>2014-01-01</td></tr> </table> </div> <div> <div>Computer Skills</div> <table> <tr><td rowspan="3">Programming Languages</td><td>Language</td><td>Skill Level</td></tr> <tr><td>C# Basics</td><td>Beginner</td></tr> <tr><td>Java</td><td>Programmer</td></tr> <tr><td></td><td>PHP</td><td>Ninja</td></tr> </table> </div> <div> <div>Other Skills</div> <table> <tr><td rowspan="2">Languages</td><td>Language</td><td>Comprehension</td><td>Reading</td><td>Writing</td></tr> <tr><td>Bulgarian</td><td>intermediate</td><td>beginner</td><td>advanced</td></tr> <tr><td></td><td>english</td><td>advanced</td><td>beginner</td><td>intermediate</td></tr> </table> <div> <div>Driver's license</div> <div>B, A</div> </div> </div>	First Name	Svetlin	Last Name	Nakov	Email	svetlin@nakov.com	Phone Number	088888888888888	Gender	Male	Birth Date	1990-06-15	Nationality	Indian	Company Name	Kaspichan Software	From	2013-01-01	To	2014-01-01	Programming Languages	Language	Skill Level	C# Basics	Beginner	Java	Programmer		PHP	Ninja	Languages	Language	Comprehension	Reading	Writing	Bulgarian	intermediate	beginner	advanced		english	advanced	beginner	intermediate
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**Constraint 01:** You must **validate the data**, entered by the user, **in the PHP script** as follows:

Input Fields	Server Validation in the PHP Script Criteria
First Name, Last Name, Language	Only letters Between 2 and 20 symbols
Company Name	Letters and Numbers Between 2 and 20 symbols
Phone Number	Numbers and "+", "-", ""
Email	Letters, Numbers Only one "@", only one "." Example: <b>example@example.com</b>

**Constraint 02:** The buttons **"Remove Language"** and **"Add Language"** must **dynamically add /remove** an input field for language and a selection for level of knowledge. The same goes for **Programming Languages** and **Languages from Other Skills**. Example:

Action	Result
Default	
When we click "Add Language" 2 times	
When we click "Remove Language" 1 time	

## Problem 6. \*Combo Box

Write a PHP script **ComboBox.php** which generates an HTML form that contains **cascading related comboboxes**. There are **two dropdown menus**. The content of the second dropdown menu depends on the chosen option from the first one. The first dropdown menu contains **continents**, the second dropdown menu contains **countries from the continents**. Example:

Content of First Dropdown Menu

Europe  
Asia  
North America  
South America  
Australia  
Africa

Chosen Continent from First Dropdown Menu	Content of Second Dropown Menu	
Australia	<div>Australia</div>	<div>Australia</div>
North America	<div>North America</div>	<div>Canada</div> <div>Canada</div> <div>Mexico</div> <div>USA</div>