



APLICAÇÕES PARA A INTERNET

Engenharia Informática

PHP Forms

Objectives:

- (1) Use of procedural PHP for creating dynamic web pages.
- (2) Form processing using PHP.

Note the following:

- Every page MUST comply to the HTML5 standard and it must be properly validated as such;
- The PHP code written MUST follow the "coding style guide" PSR [PSR-2];
- There is a video for each exercise showing the intended result;

Setting up the environment:

- If the Vagrant Homestead environment is not installed and configured, follow the instructions of worksheet 1.
- Run "vagrant up"
- Store your exercises on the "C:\<AInet>\pratica\ficha3" folder.
- Note: In alternative, create a site on Laragon (or similar tool) and, if possible, use the same URL to access the content (<http://ainet.pratica.3.test/>)

In this worksheet, you will build, use and validate a web form.

Part I

1. Modify the provided web page ([php01.php](#)). This page must present a form that uses the GET method and that has 2 text fields ("lines" and "columns") and a submit button. When

user submits the form (clicks on submit button), the form's data is sent to "php01-action.php" ("**php01-action.php**" file is provided).

- a. The php01.php structure is already defined. You just have to replace the string XXXXX with the appropriated code.
 - b. Modify the "php01-action.php" code so that it accepts data from previous form and changes the table size accordingly (number of lines and columns).
2. Modify the provided web pages (**php02.php** and **php02.view.php**), so that when the user "loads" php02.php page it will show the form, and when the user submits the form (clicks on submit button), the numbers table will be shown on the same page. Guarantee that when "php02.php" is opened for the first time, no errors occur and table is not drawn at all. Table is only drawn when both "lines" and "columns" fields are filled.

Also, add 3 hyperlinks to "php02.view.php" file to open the table with 3 predefined sizes (4 lines x 4 columns; 5 lines x 10 columns; 10 lines x 10 columns). Make sure that all previous code is reused – no extra code is required to draw the table.

- a. All presentation code (HTML and some PHP code related to the presentation) must be defined on php02.view.php.
 - b. The php02.php should not have any presentation related code (no HTML, echos, prints, etc.). It just prepares data (fills the variables \$lines and \$columns with the correct value) to be used by the php02.view.php.

Part II

Dropdown lists (<select>)

3. Duplicate the web page "php02.php" as "**php03.php**", and "php02.view.php" as "**php03.view.php**". Add a dropdown list (<select>) to the form on "php03.view.php", with the list of operations that can be applied to the number's table. Operations list include 4 values: "*", "+", "/" and "-"; represented by the following descriptions: "Multiplication", "Addition", "Division" and "Subtraction". Modify PHP code (on "php03.php" and "php03.view.php") so that the number's table is drawn according to all 3 fields ("lines", "columns" and "operation").
 - a. Both the form action and hyperlink's URLs must be changed to php03.php

Part III

GET versus POST

4. Duplicate the web page “php03.php” as “**php04.php**”, and “php03.view.php” as “**php04.view.php**”. Modify the code so that the form uses the POST method instead of the GET method.
 - a. Both the form action and hyperlink’s URLs must be changed to php04.php
 - b. Use the browser developer’s tools and postman application to analyze and compare the HTTP Request and HTTP Responses of “php03.php” (GET method) and “php04.php” (POST method). Answer the following questions:
 - i. Where is the data submitted by the form transported on the HTTP request, when the HTTP request method is GET and POST?
 - ii. When the hyperlinks are used (clicked) what is the HTTP method of the HTTP request? Is it possible to change the HTTP method used by the hyperlinks?

Suggestion:

On the chrome developer tools / network tab, select an HTTP message. Then, using the right-click mouse, select the option “copy / copy as cUrl”

On the “postman” application, click on the option “Import”, choose “Past Raw Text” and then copy (CTRL+C) the HTTP message from chrome. Click on Import. You now have a “copy” of the HTTP message sent by chrome, on Postman application.

Part IV

Form validation

5. Duplicate the web page “php03.php” (not the php04.php, as the GET method is more adequate for this web page) as “**php05.php**”, and “php03.view.php” as “**php05.view.php**”. Implement form validation (on the server – with php code), to guarantee that lines and columns only accept integer values from 1 to 20 and that a valid operation (*, +, /, -) is always selected. When any invalid value is submitted, an error message (next to the invalid field or fields) is presented to the user and the table is not drawn.
 - a. Both the form action and hyperlink’s URLs must be changed to php05.php
 - b. Error messages should be displayed immediately after the fields (text or selects), with the following structure:

```
<p class='error'> ... error message ... </p>
```

- c. To check if a value (e.g. \$lines) is an integer between 1 and 20, the following expression may be used (returns true if value of \$lines is valid).

```
filter_var($lines, FILTER_VALIDATE_INT,  
    ["options" => ["min_range" => 1, "max_range"=> 20]])
```

- d. To test “operation” field validation, change the “operation” value directly on the URL’s Query String (check the provided video).